LA PRIMA PARTE DELLA LUCE DEL DIPINGERE ET DISEGNARE

THE FIRST PART OF THE LIGHT OF DRAWING AND PAINTING

This noble art of drawing and painting cannot be grasped through mere desire alone, nor mastered through random trial. It requires thoughtful study, dedicated effort, and the careful observation of nature. Though some may consider it sufficient to practise only a surface-level imitation or slight deviation from what they see, this is not enough. The true artist must possess a deeper understanding—one not merely handed down by tradition or guessed at, but developed through the noble application of rational observation and disciplined practice.

Painting is not a craft to be unlocked through impulse or mere chance. It must be approached as a learned pursuit—one that has been described with great care by poets and historians alike, and illustrated through living examples and true likenesses. For this reason, painting has always been honoured among the liberal arts and cherished by learned minds.

Yet, we must admit, even those who take up this noble discipline sometimes fail to understand its foundations. Too often we see confusion, with even experienced practitioners lacking the ability to explain their own methods or to ground their techniques in clear principles. Therefore, I have taken great care to organise and present these teachings clearly and intelligibly, for the benefit of both learners and fellow practitioners, especially the youth, who deserve accessible instruction.

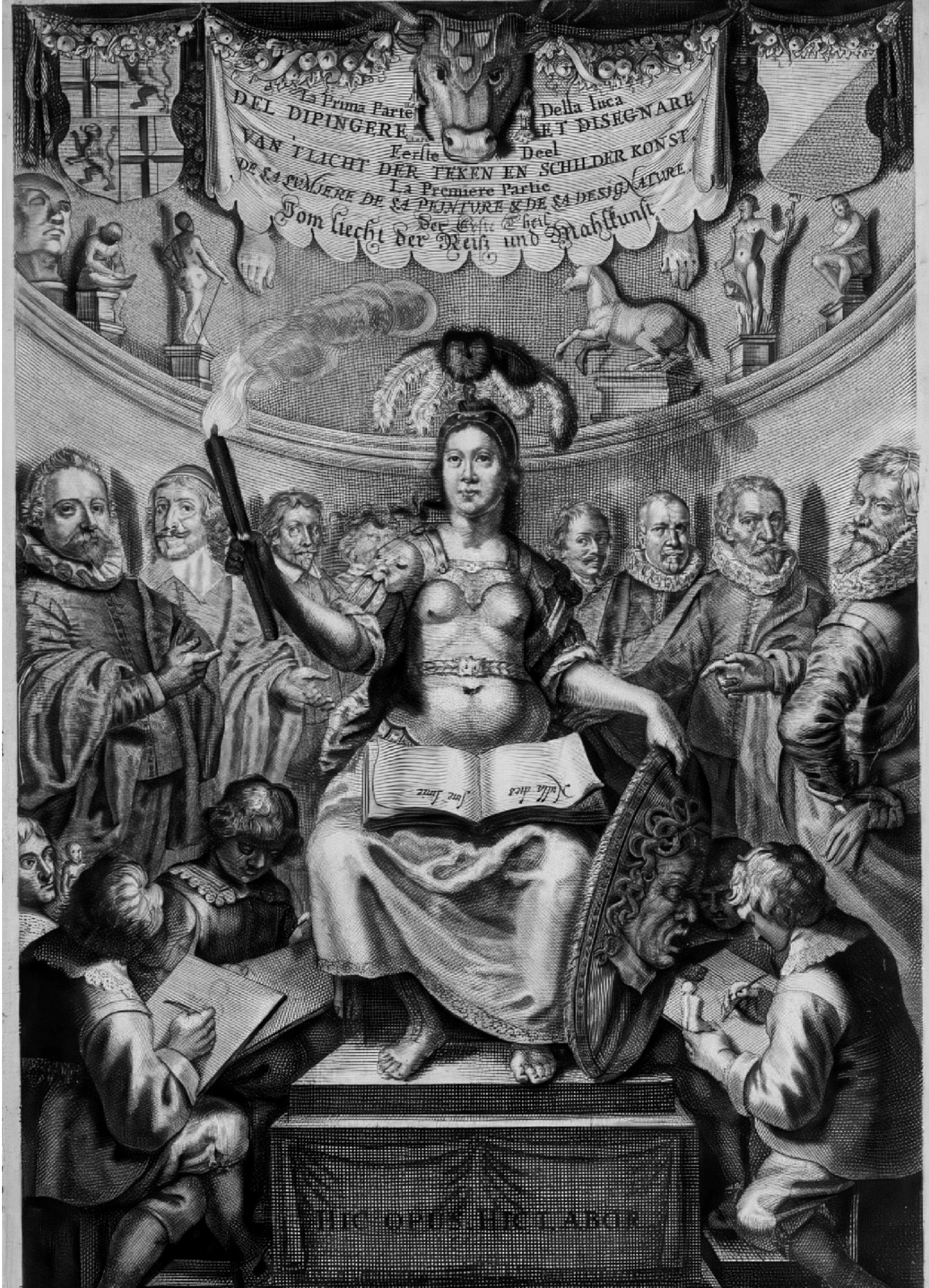
In order to do this effectively, I have not relied solely on my own experiences or books alone, but have also studied with excellent masters—particularly the widely renowned Jean Cousin, painter to the King of France, and many others of distinction. From such men, I observed whether their work derived from geometry or freehand invention, and how they taught these concepts to their students. I learned that many masters had in fact passed down their methods through schools and apprenticeships in various regions, and thus I resolved to gather this knowledge in a more accessible and well-ordered form.

My goal was to create a system by which even a beginner, unaided by a teacher, might progress through self-instruction. This idea was especially encouraged by Mr. Antoine de Pluvinel, gentleman and riding master to the French court, with whom I spent time in the household of the Princes of Orange and other high nobility. These were men skilled not only in arms and governance, but also in the arts of painting, music, and the written word.

I was asked to create a system that could be used for the education of young noblemen, especially for those in military and administrative service. It was hoped that this training would not only enrich their minds but also cultivate their sense of order and refinement. However, because the noble youths often found conventional methods too difficult or dry—particularly those involving anatomical study—I turned to a gentler, more accessible approach.

Through examples, model diagrams, and simplified illustrations, I have prepared this book to offer clear and direct instruction. I drew inspiration from Andrea del Sarto of Florence, who demonstrated in his works how the human figure could be rendered with grace and economy, without burdening the student with excessive labour. Accordingly, I have offered figures that are straightforward and easily copied, so that one may, with minimal effort, master the visual principles needed to depict any human form encountered in the world.

Thus, I ask you not to judge my efforts too harshly. I offer this work with honest intent and the hope that it may be of some benefit. I entrust it to the thoughtful reader, to those who love the arts, and to those responsible for shaping the minds of the next generation.



La Prima Parte Della luca
DEL DIPINGERE ET DISEGNARE
Eerste Deel
VAN 'T LICHT DER TEKEN EN SCHILDER KONST
La Premiere Partie
DE LA LUMIERE DE LA PEINTURE & DE LA DESIGNATURE.
Der Erſte Theil
Vom liecht der Reiß und Mahlkunſt

Nulla dies
sine linea
HIC OPUS HIC LABOR

Con preui: Sae Cæſar Maieſt. T' AMSTERDAM BY IOHAN BLAEU Con preui: Regis Criſt:

The art of drawing, because of both its excellence and its utility, has always been esteemed. It is noble and necessary. One cannot deny that it is the mother of many fine crafts—unless one is entirely hostile to it—for there is no mechanical art that does not rely on its aid. Painting itself, from which drawing originates, would not exist without it. Everything that poetry may represent through the sweetness of its verses, this noble art expresses through lively and natural images.

For this reason, great lords have long honoured it and held it in high regard. And yet today, even those who use it, including masters themselves, often fail to understand it fully or recognise its true origin. It is for these reasons that I have felt compelled to search out new approaches to clarify its principles and to serve the public good.

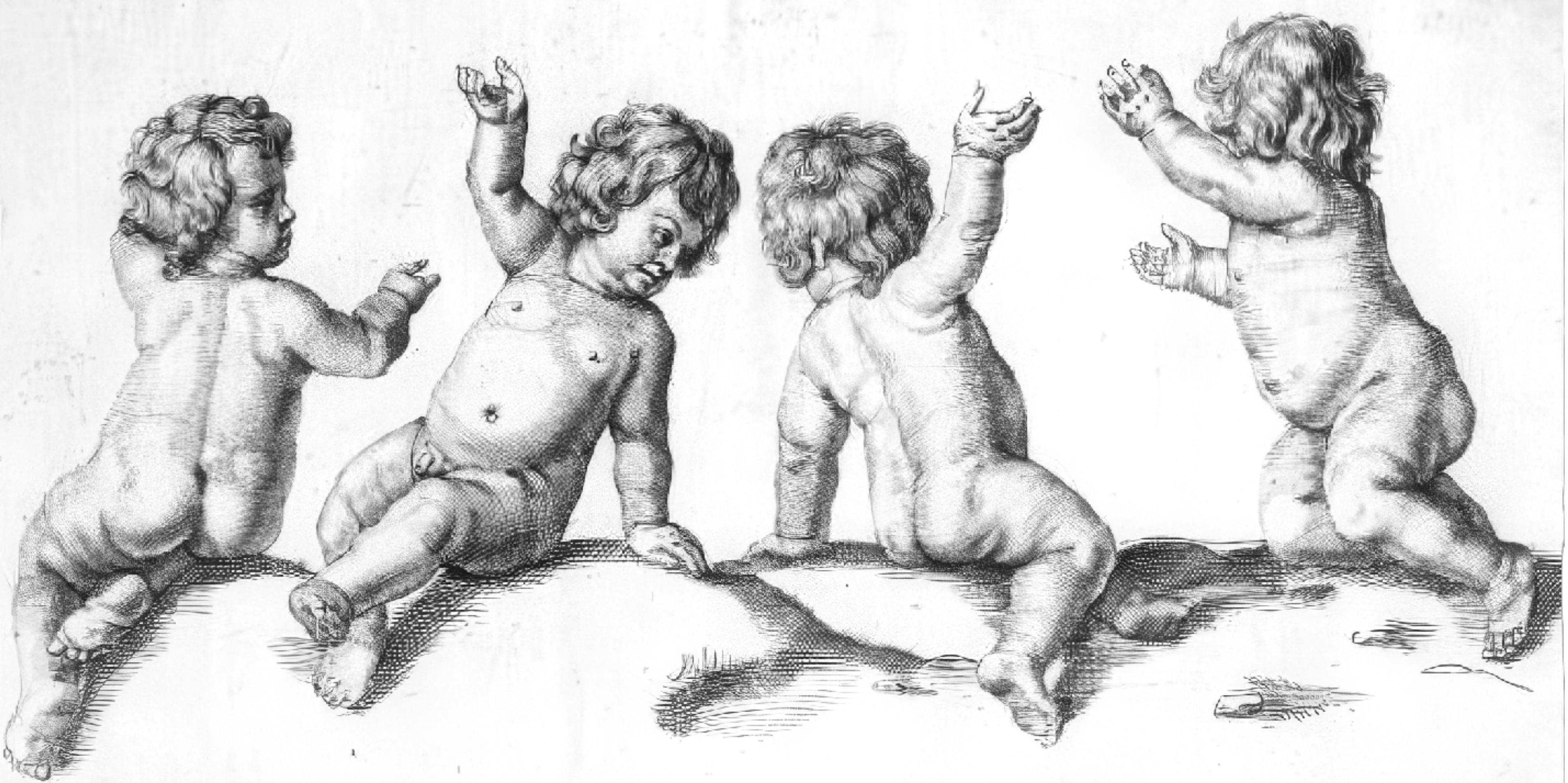
In my youth, I devoted myself to many diverse studies, but above all, I applied myself to mastering the knowledge of drawing. I have read the works of the most excellent authors on the subject and learned from distinguished masters, such as the late Sir Desmaretz, painter to His Most Christian Majesty and gentleman of his chamber; the renowned painter Sir Pietro Paolo Rubens; Sir Abraham Bloemaert; the talented Paulus Moreelse, painter and architect of the city of Utrecht; and more particularly with Van der Burg, with whom I visited the academy where the most celebrated minds of the age were then gathering.

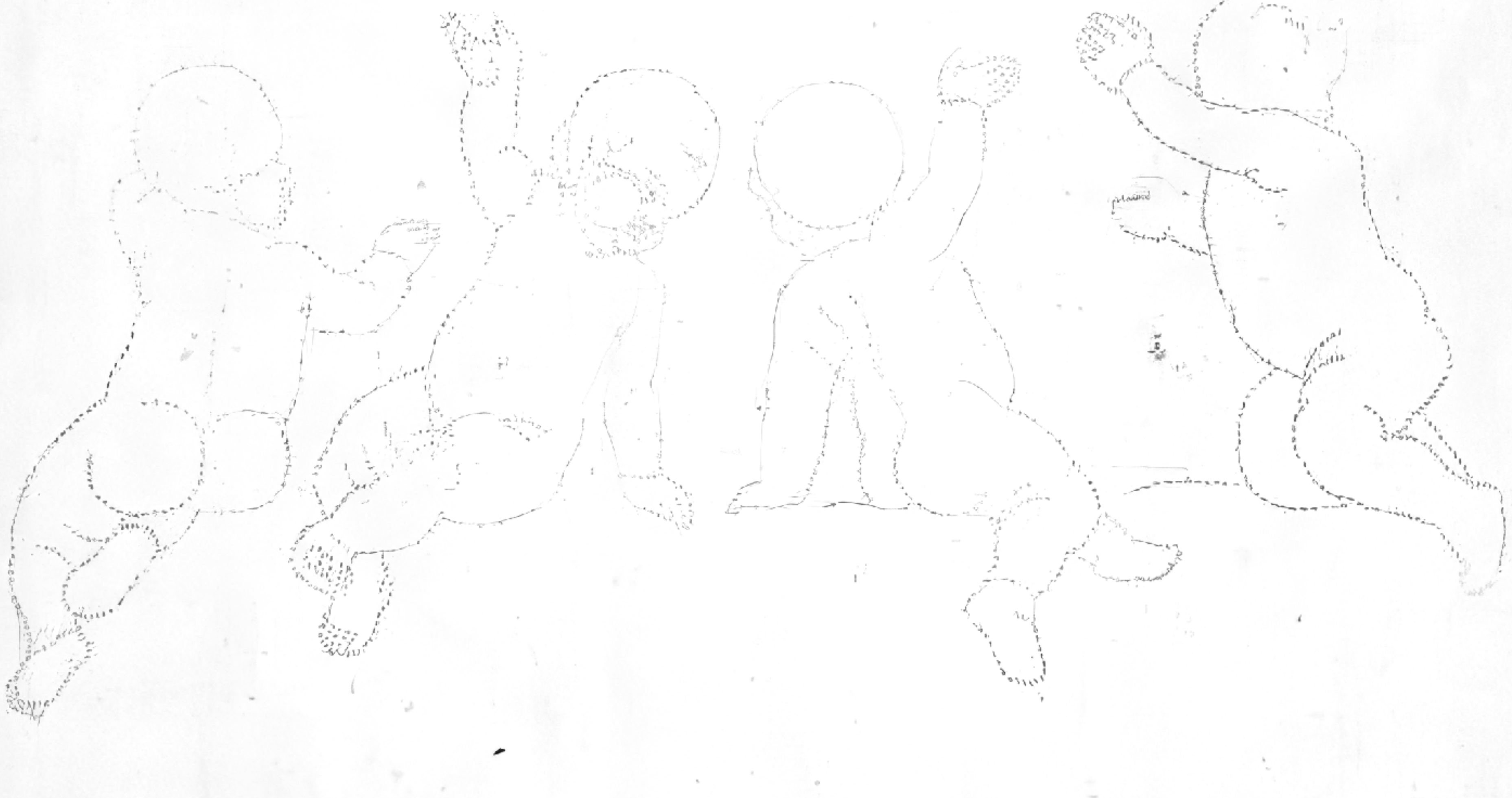
Through diligent effort and sustained care, I came to realise that this noble science cannot be truly understood by anyone who is not first well grounded in mathematics. It is true that our masters have long taught drawing, but often through lengthy and difficult methods. This inspired me to bring some clarity to the subject, so that those eager to learn might reach understanding with less hardship.

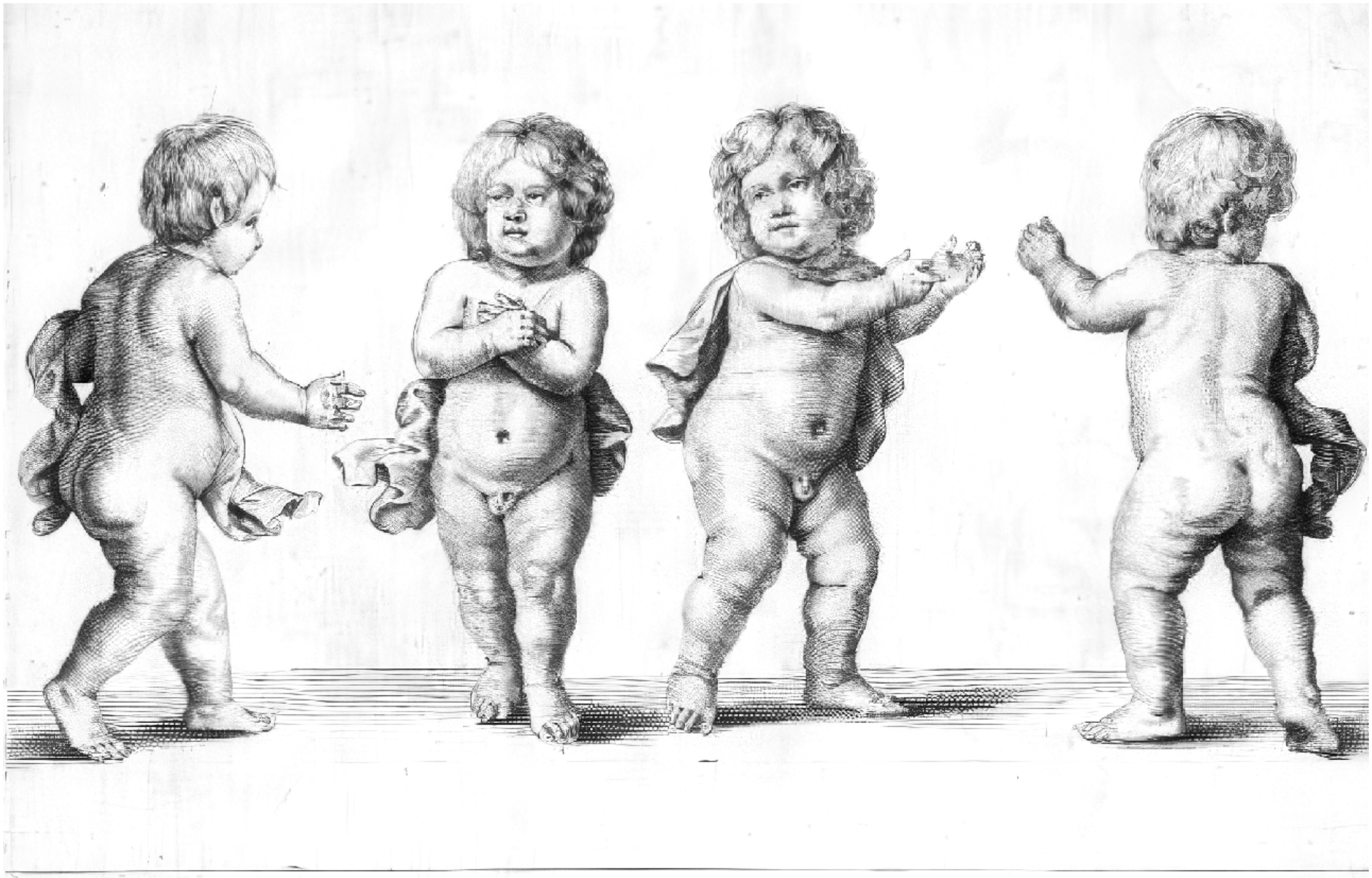
I was also greatly encouraged by the persuasions of Sir Antoine de Pluvinel, first equerry to His Most Christian Majesty, who was sent by His Highness Prince Maurice to establish an academy in Paris. There, many princes and young noblemen were sent to learn fencing, handling the pike, fortification, music, writing—and yet, drawing was lacking. Sir Pluvinel rightly judged that it should be taught, especially so that when these young men would later serve His Majesty in arms, they might be able to organise battalions and fortify positions in proper form.

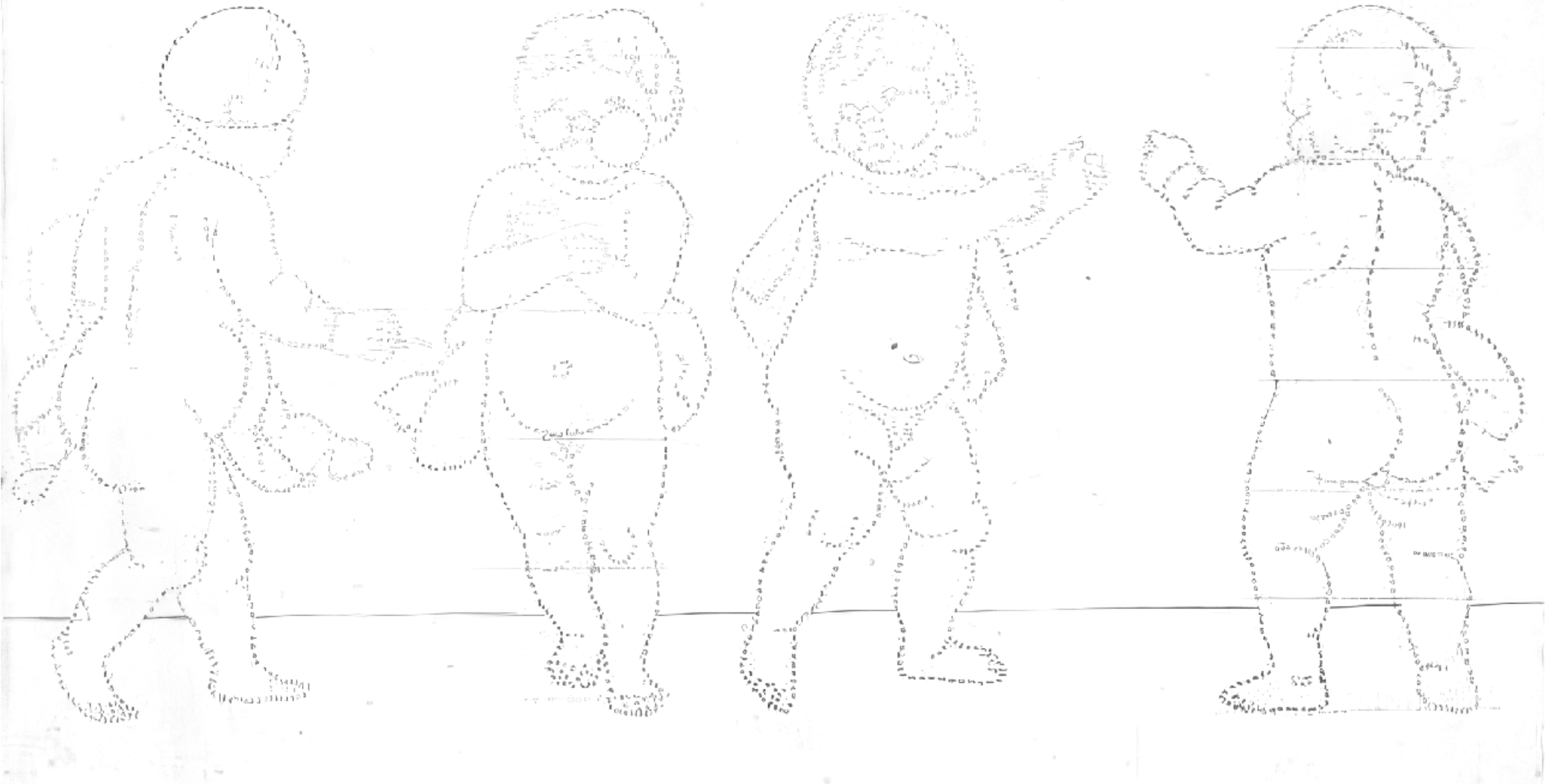
At that time, I discovered that the young gentlemen—especially the French—were impatient, finding our ordinary method too long and difficult. I was compelled, therefore, to search out another, simpler and less tedious approach. I based this on the rules and figures of Andrea Palladio's *Five Orders*, and I showed, through six or seven mathematical figures, a clear and simple method for drawing everything one sees in the world.

But dear reader, so as not to detain you with a lengthy discourse, I ask only that you accept this small labour of mine kindly, and that you use it for your benefit. And I pray that God may bless your efforts and take you under His protection.

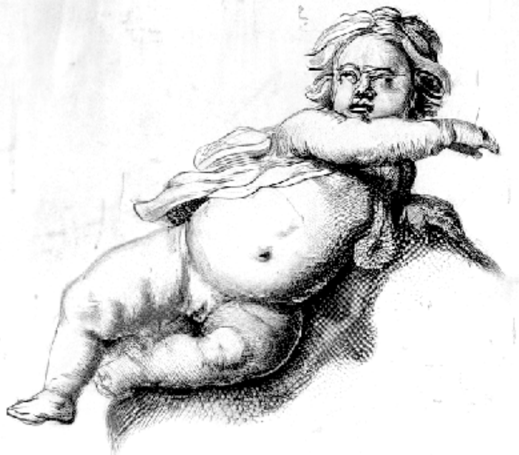
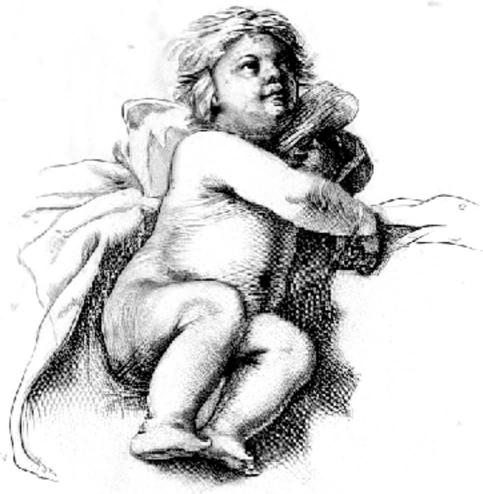
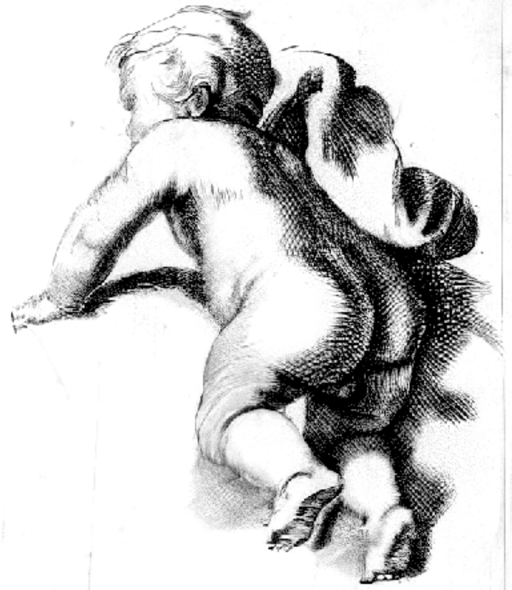
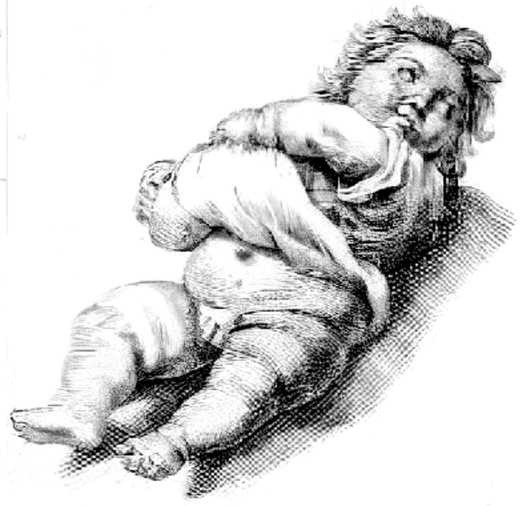
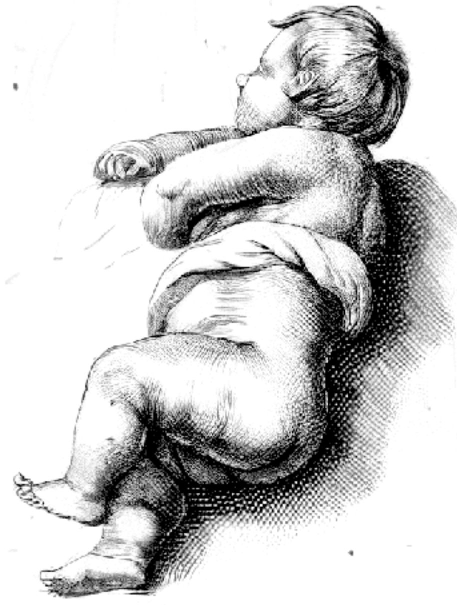
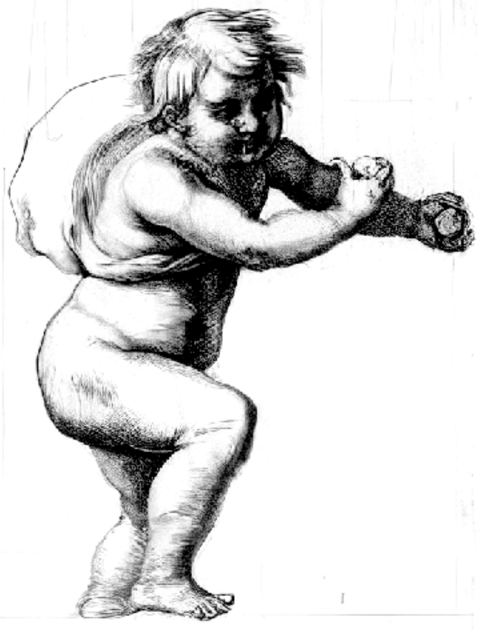
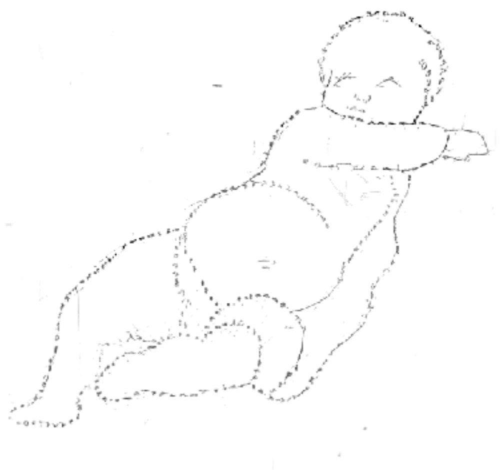
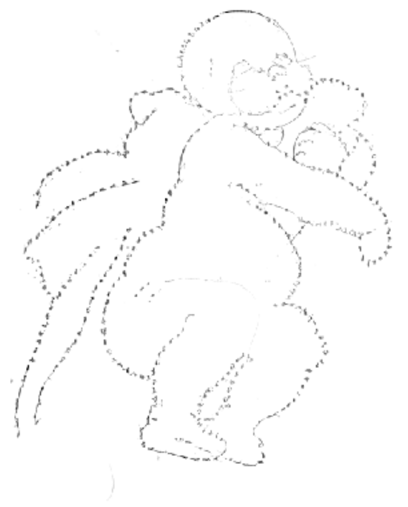
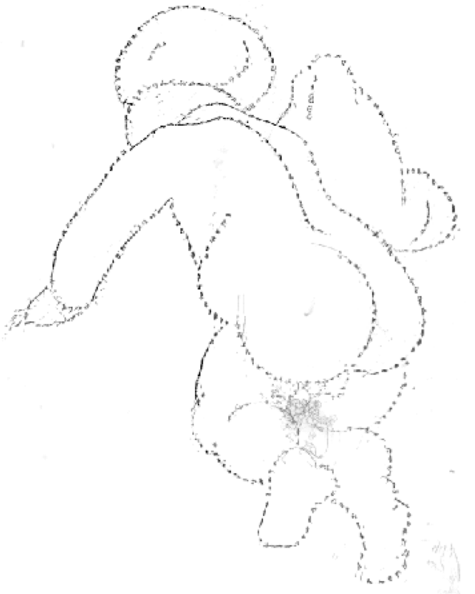
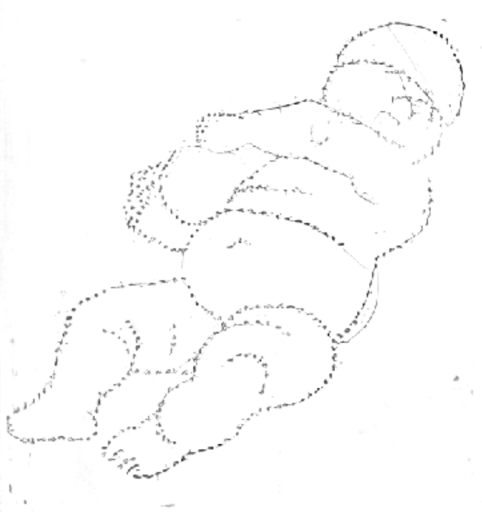
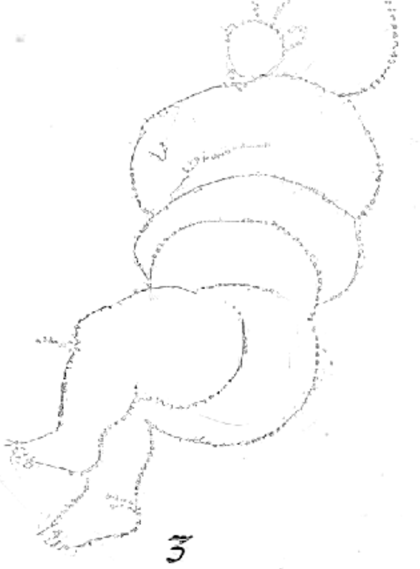
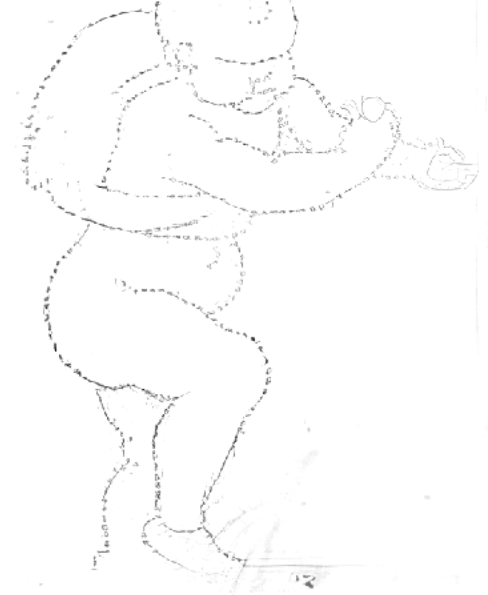






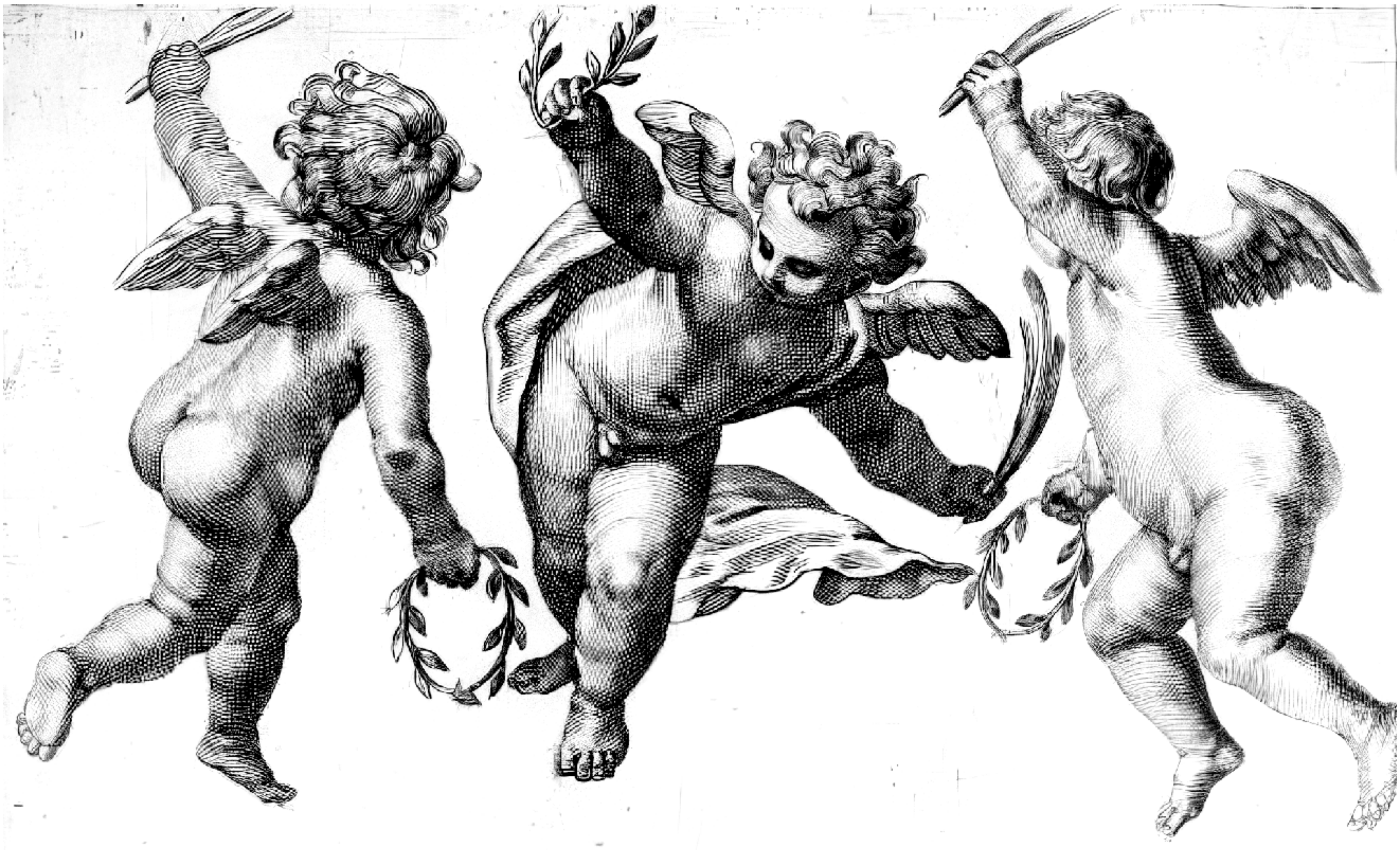


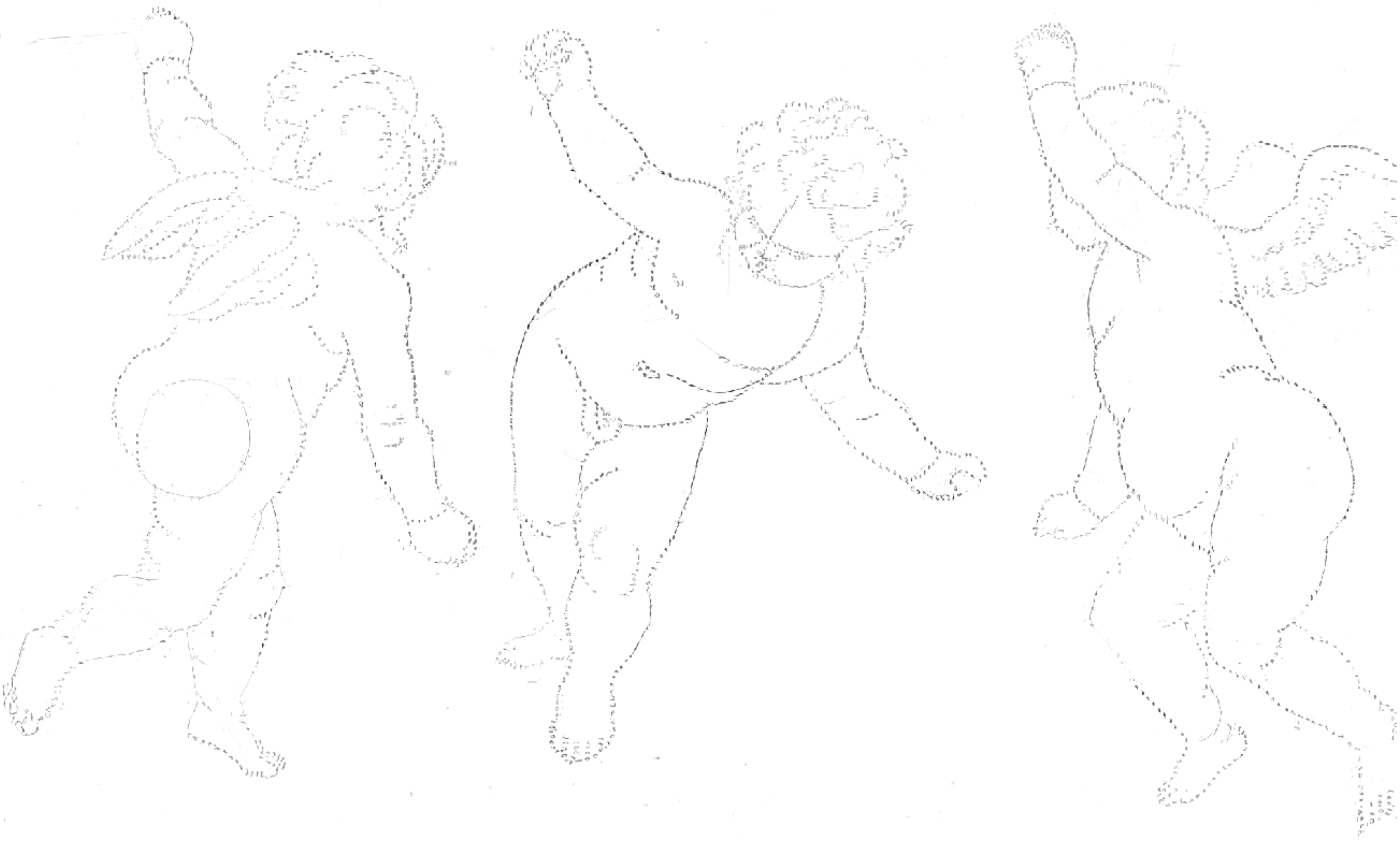
II

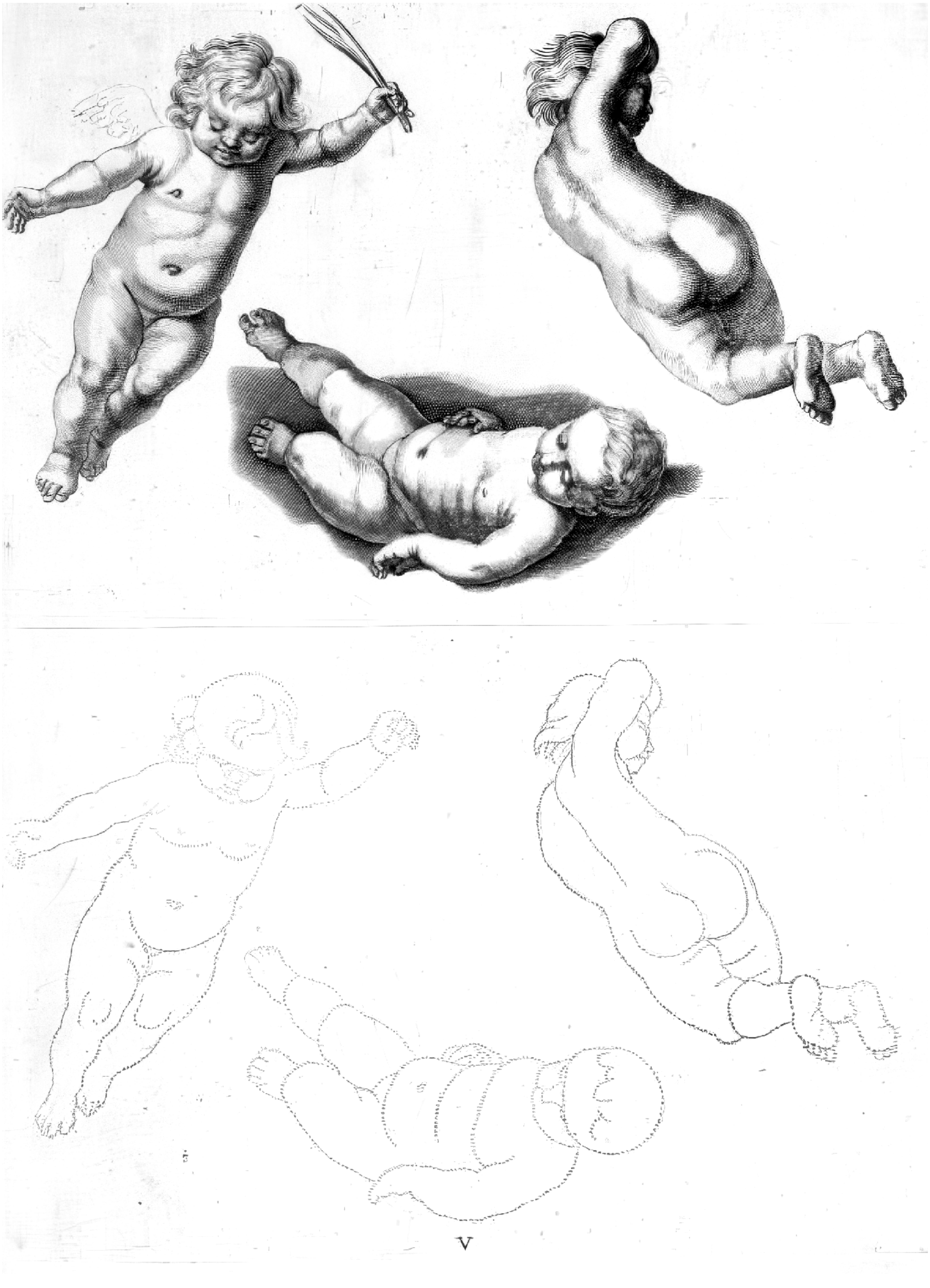













3

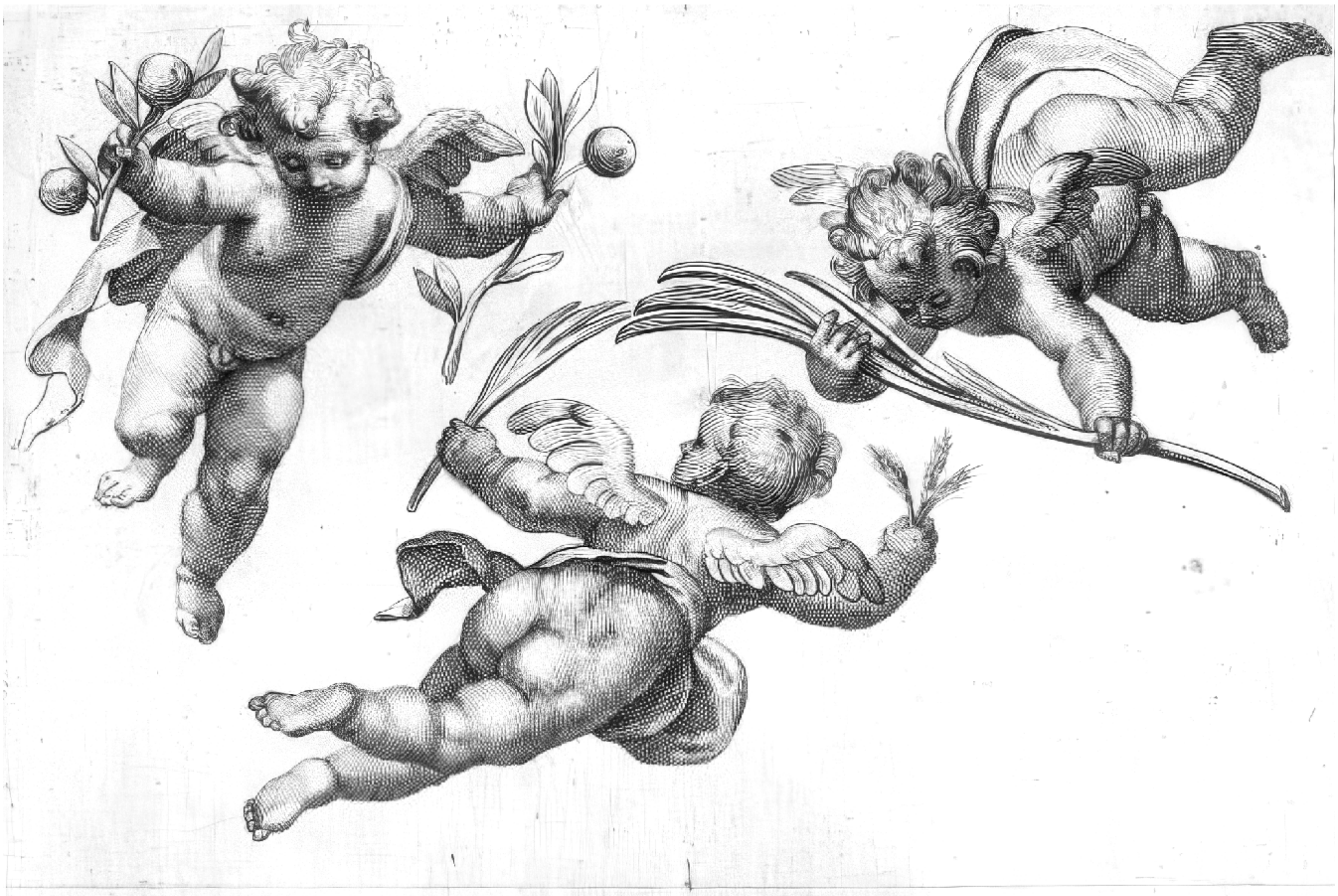
12

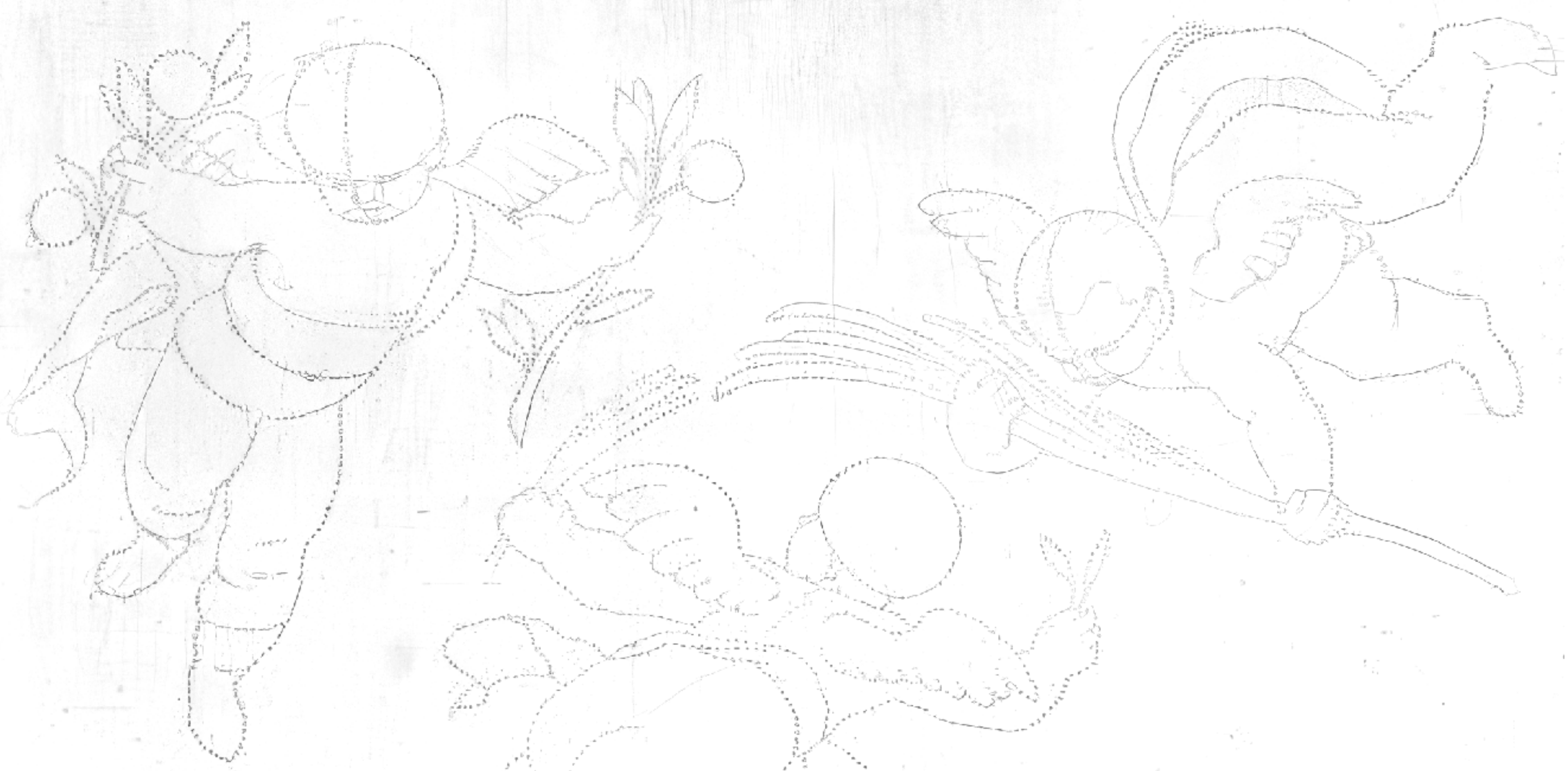




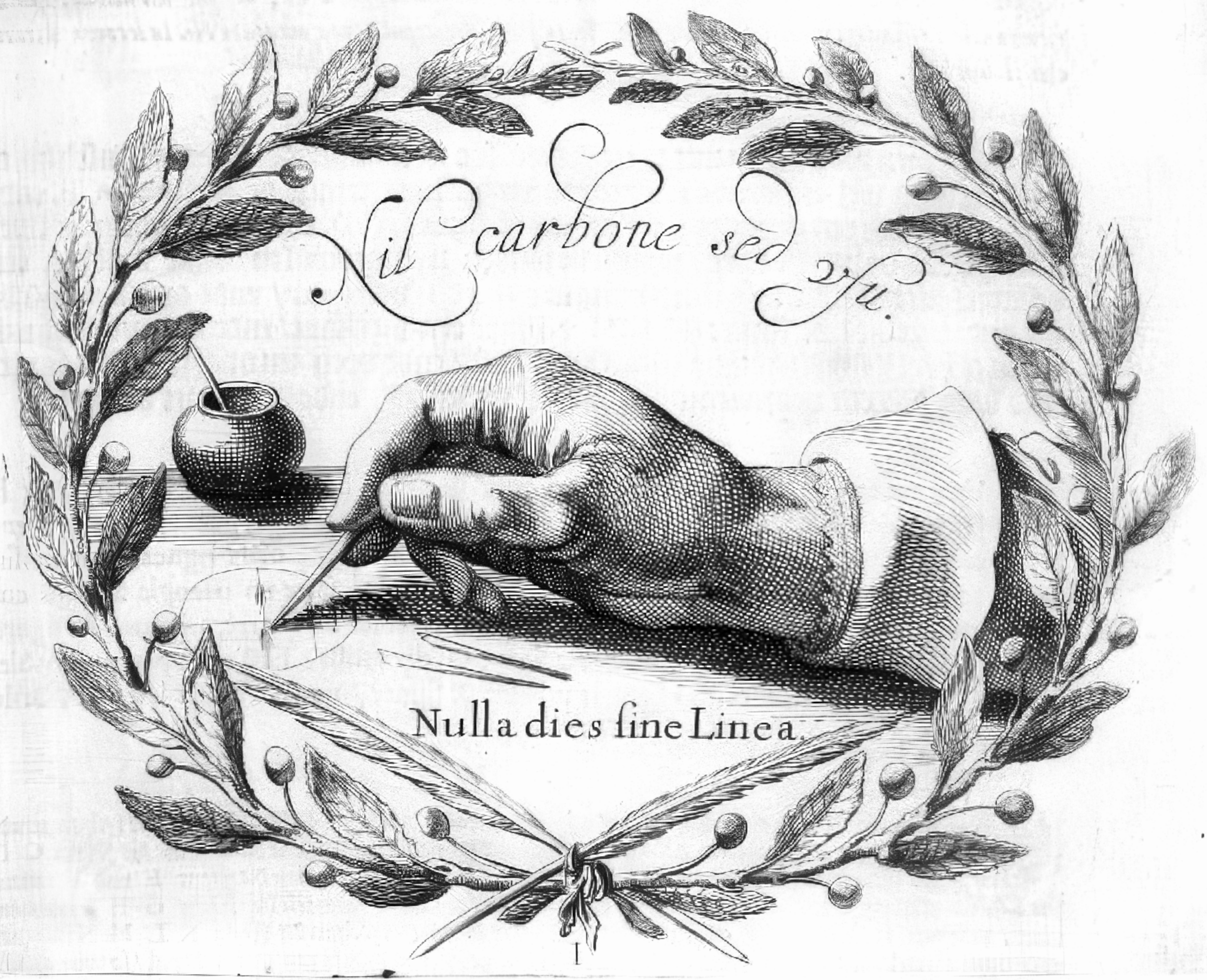


V





VI


Nil carbone sed vſu.
Nulla dies ſine Linea.
I

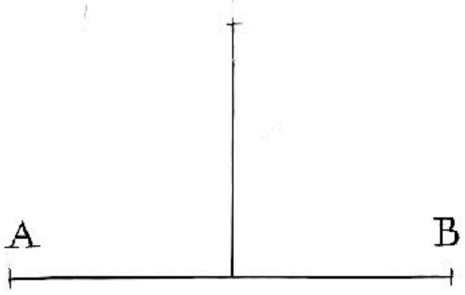
Foundations of Line and Form

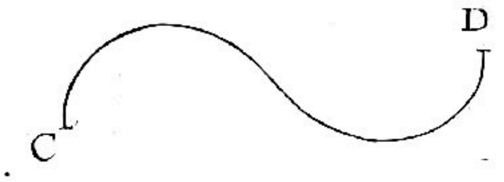
Before attempting any kind of drawing, it is absolutely necessary to have a solid grasp of how to draw a straight line—such as the one shown in figure A–B. After this, one must practise drawing a curved line, as demonstrated in figure C–D.

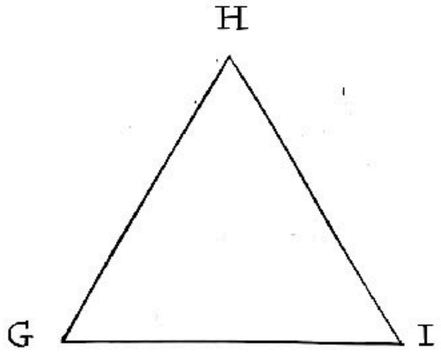
Next, learn to draw two lines placed one above the other, as shown in figures E and F. Following this, construct a triangle with three sides, as represented in figure G–H.

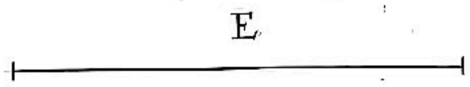
On the opposite side, draw a square, as shown by figures K–L–M–N. Then draw a circle, which is demonstrated in figure O. Finally, practise drawing an oval, as proposed in the principal figure marked P.

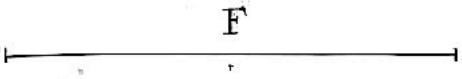
All of this should be done using charcoal.

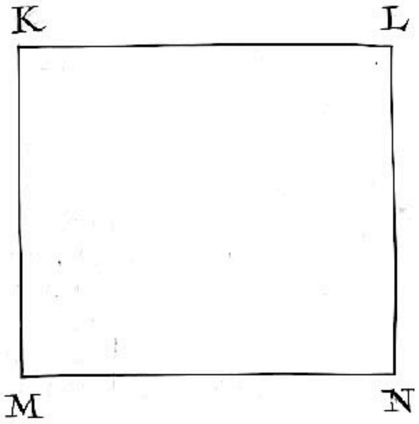

A
B

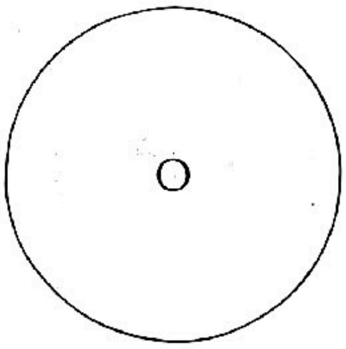

C
D

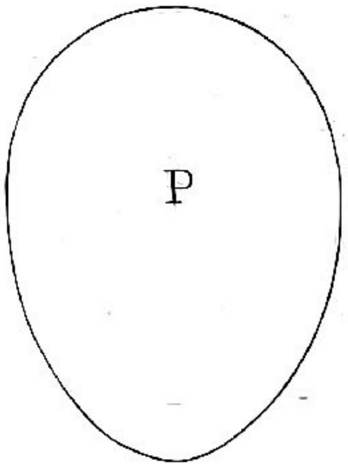

H
G
I


E


F


K
L
M
N


O


P

Holding the Charcoal and Constructing Basic Forms

It is especially important that a beginner learn to hold the charcoal firmly, in such a way that the steadiness and control of the hand make it easier to draw shapes or execute any task required.

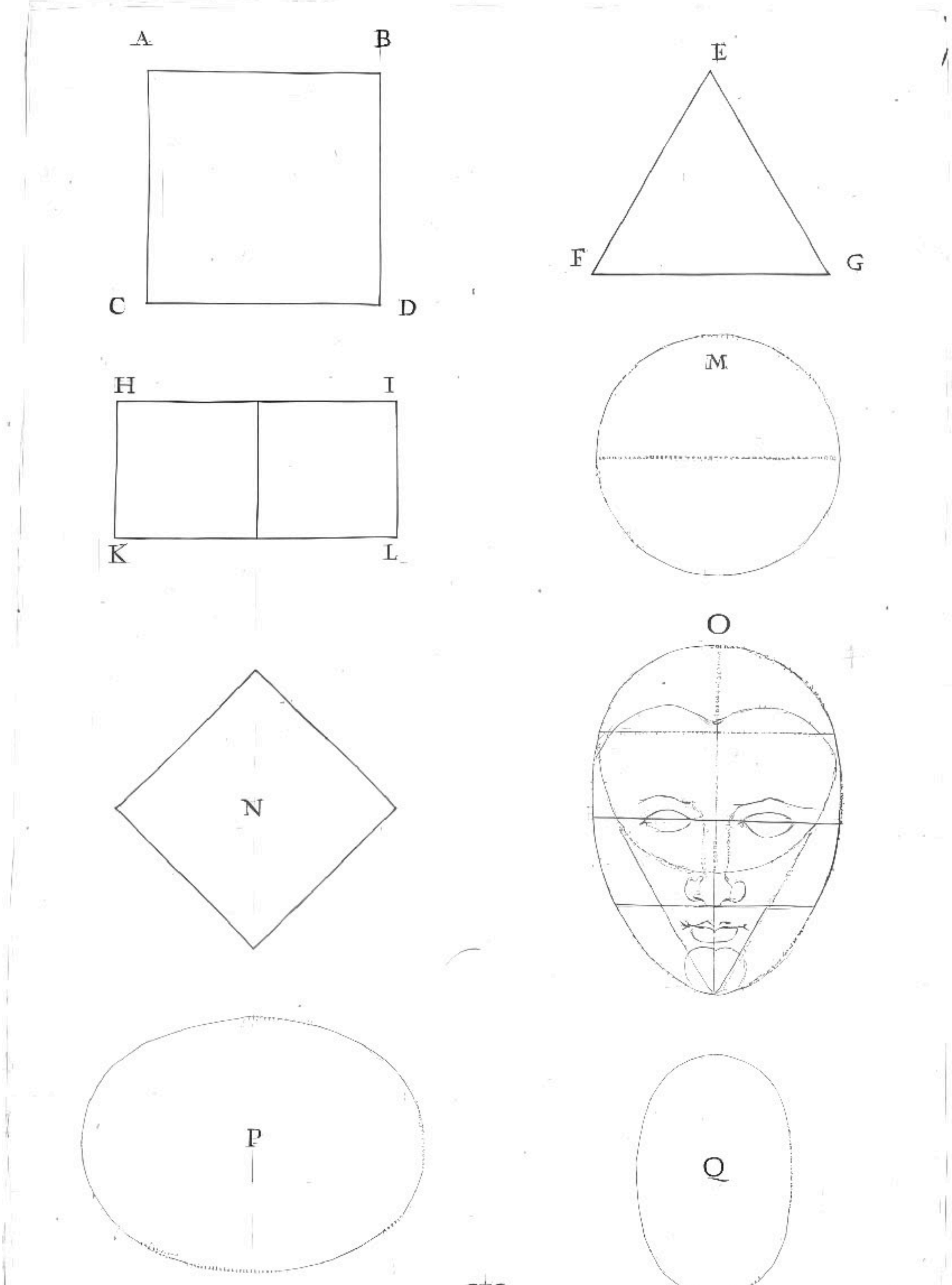
For example, if you intend to draw the figure A–B–C–D, which is a square, begin by drawing a straight line from A to B, and then from C to D. This should be done with great assurance and with consistent pressure in all strokes.

Next, draw the second pair of lines—A to C and B to D—as two parallel lines. Then, for your third figure, you will draw a triangle using the letters E–F–G.

Follow this with another figure, constructed as shown by the letters H–I–K–L, and then two more forms represented by M and N.

Once these are complete, you will construct an oval within a triangle divided into three equal parts. Then repeat this process to draw two more ovals of the same kind, as demonstrated by the letters P and Q.

Through mastering this kind of figure, you will gain the ability to draw and portray anything in the world.


A
B
C
D
E
F
G
H
I
K
L
M
N
O
P
Q

III

Beginning the Human Figure: Constructing the Head

It is most useful for the beginner, or for anyone who takes pleasure in this art, to prepare themselves by understanding the next figure—namely, the third figure in this series. I find it best for the student to begin by learning to draw the parts of the human body, for nearly all of the most celebrated painters, both ancient and modern, have begun in this way. As the philosophers have said, “Man is a little world.”

And because the head is the principal part of the body, I have chosen to begin with it.

The head may be drawn in two ways:

First Method: The Square Division

Begin with a square divided into four equal parts, as shown in figure A–B–C–D–E–F–G–H–I. To draw it correctly, begin with an oval, and divide it into four equal sections:

- One part for the hair
- One part for the forehead
- A third for the nose
- And the last for the chin

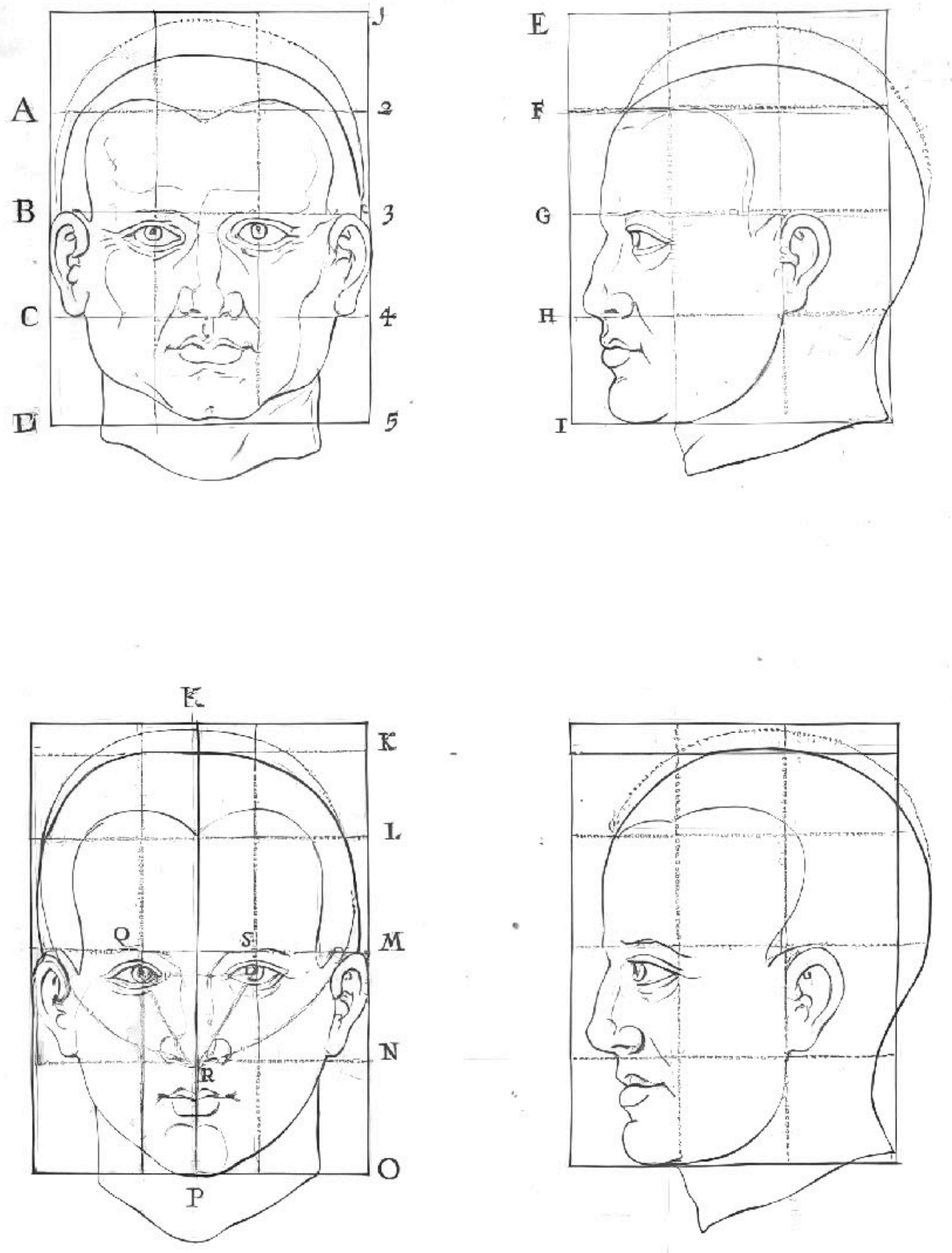
The next figure will demonstrate this more fully.

Second Method: The Centre-Line Division

Begin again with an oval, like figure K, and divide it down the centre from K to P.
After drawing this central line, divide the oval once more into four parts, using horizontal lines:

- Line L marks the start of the hairline
- Line M is for placing the eyes, spaced evenly
- Line N marks the nose
- Line O marks the chin

Then draw a vertical line from O to R, and another from R to S. These will help you locate the outer limits of the eyes and the placement of the nose with precision.


1
A
2
B
3
C
4
D
5
E
F
G
H
I
K
K
L
Q
S
M
N
R
O
P

IIII

Drawing the Front View of the Head

In this plate, the correct method for drawing the front view of the head is demonstrated, using an oval divided into four equal parts, marked by the letter A. This is the proper and accurate method for constructing the head with precision.

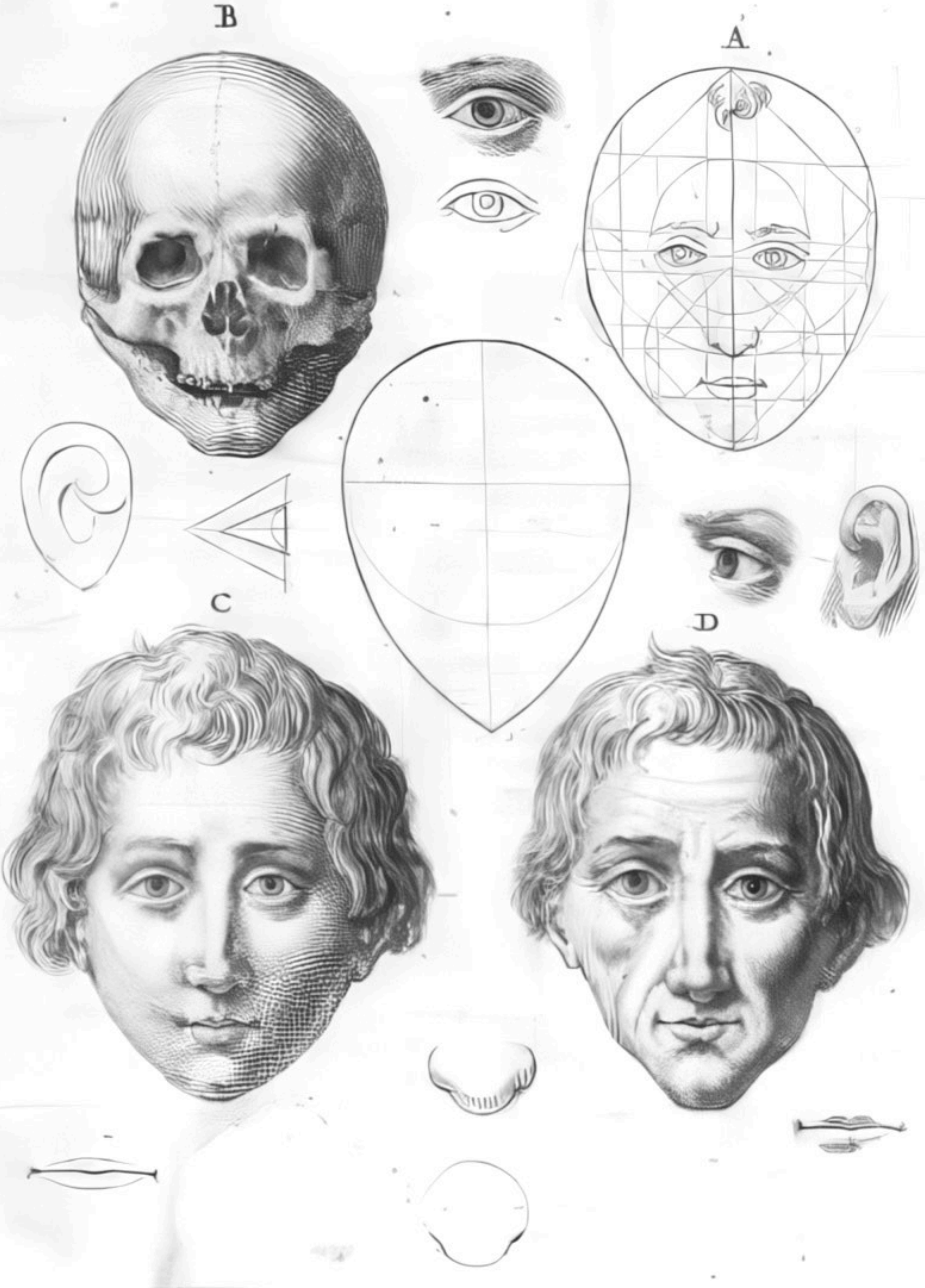
Using this approach, you can establish the correct placement of the eyes, nose, and mouth, following this division:

- The first division, starting from the top of the head, marks the hairline
- The second division aligns with the eyes
- The third passes through the nose
- The fourth ends at the chin

A vertical centreline divides the face evenly into two halves, helping maintain symmetry.

In addition:

- Figure B shows a skull, to help understand the underlying structure
- Figure C demonstrates how to draw the head of a young person,
- While Figure D shows an older person, yet both adhere to the same proportions


B
A
C
D

Constructing the Eye, Nose, and Mouth

Since the eye is one of the most important parts of the face, I will now explain how to construct it.

Begin by drawing an oval, just as shown in figures A and B, and divide it in half with a vertical line, marked C–D. Then, construct a circle inside the oval, following the instructions from my third figure M, which demonstrates the complete shape of the eye.

Next, take half the distance between B, C, and D—this will help you determine the correct proportion of the eye in profile.

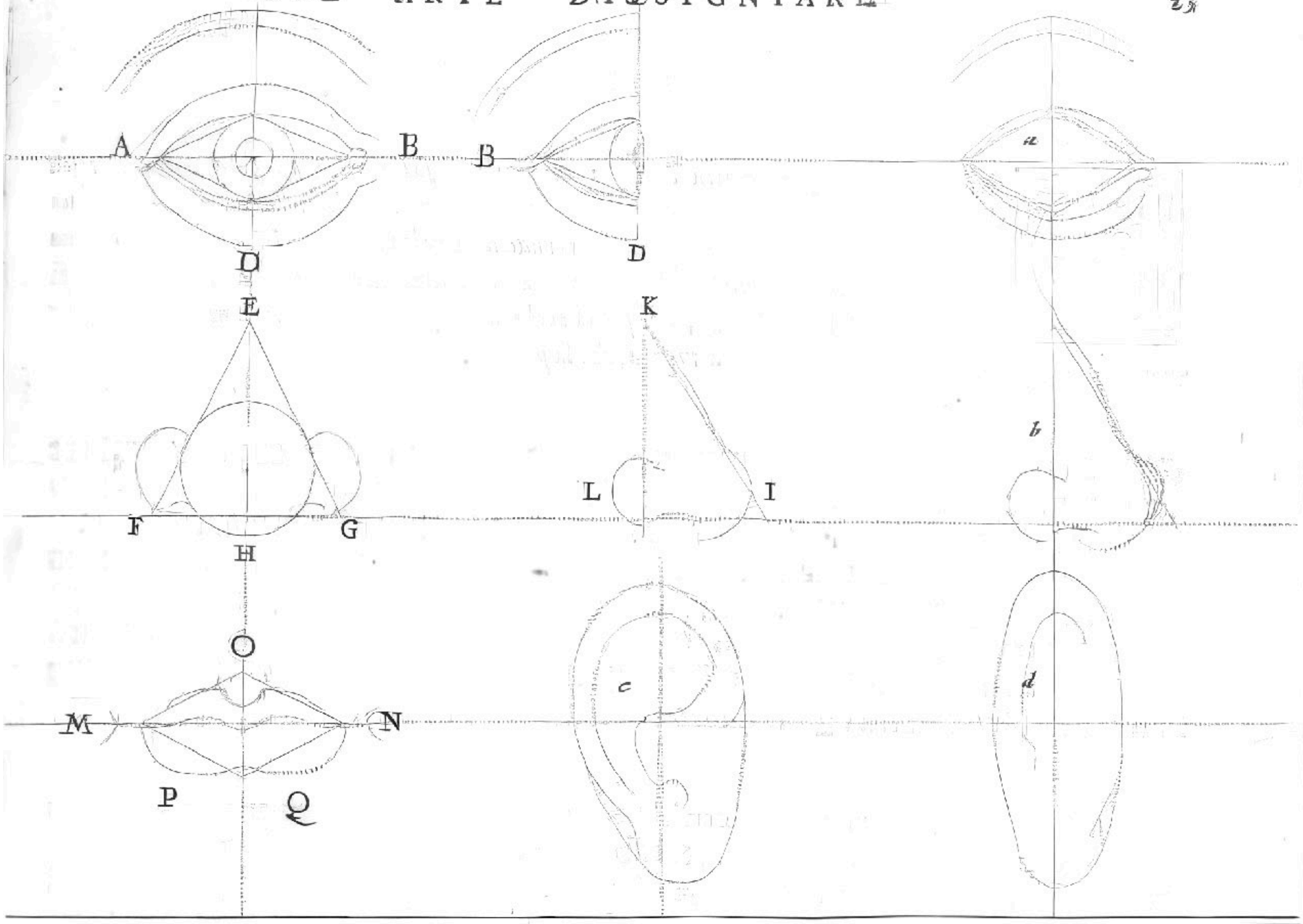
Now, because the nose is the second most prominent feature of the face, I will also explain how to construct it.

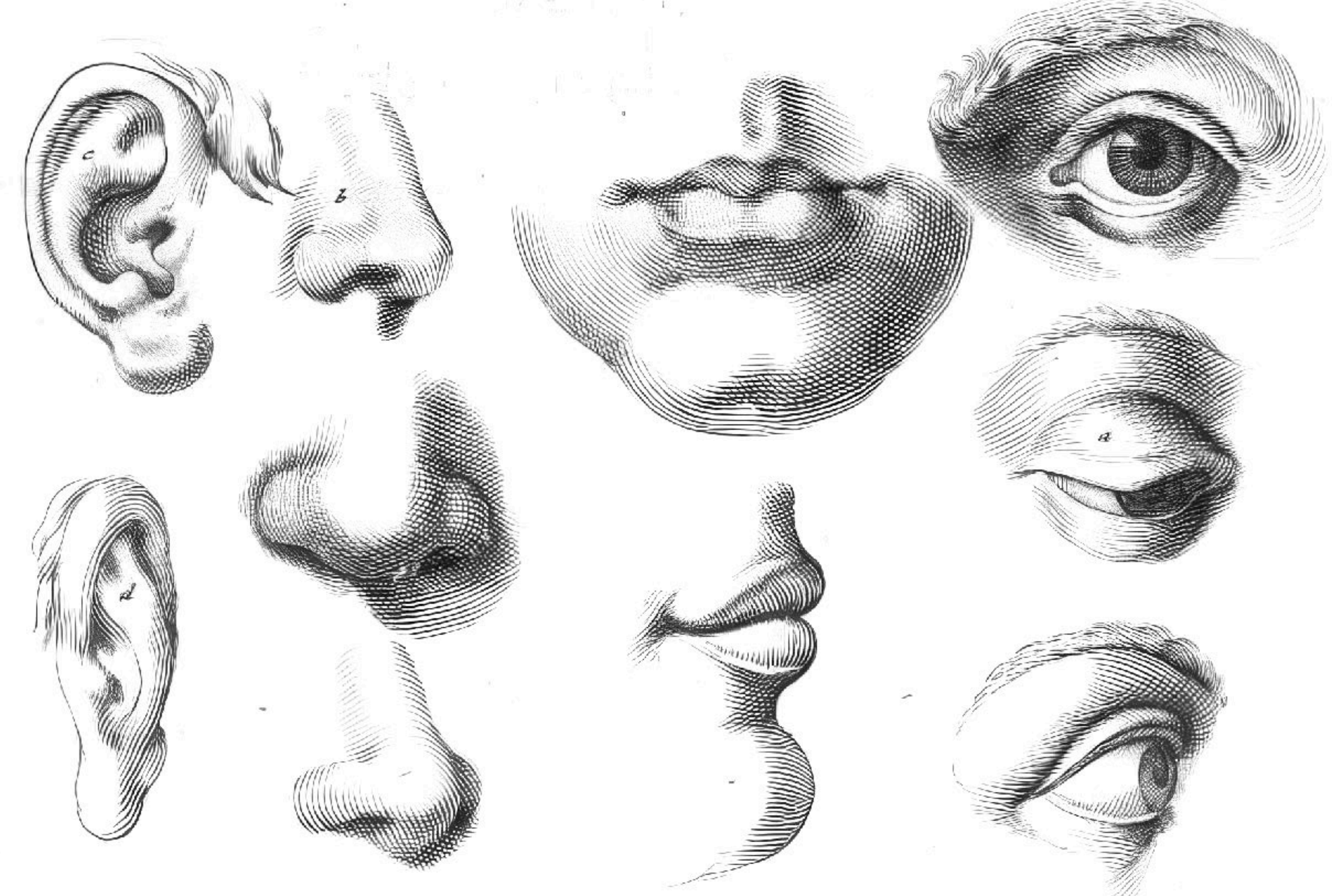
Use the figure shown by the letters E–F–G, which forms a triangle. This is illustrated in my third figure with the same letters. Divide this triangle with a vertical line from E to H. Within this triangle, draw a circle, and then add two half-circles touching the lines F and G. Using these half-circles, you can form the profile of the nose.

Then, use a half-triangle, formed by the letters I–K–L, to assist in shaping the lower part of the nose.

For the third major part of the face, the mouth, begin by drawing a line. Note that this line is not completely straight, but curves slightly, as shown by the arcs marked M and N in figure O. These represent the upper lip.

To form the lower lip, draw a half-circle using the letters P–Q. This completes the mouth in proper proportion.


A
B
B
D
D
a
E
K
b
L
I
F
G
H
O
c
d
M
N
P
Q



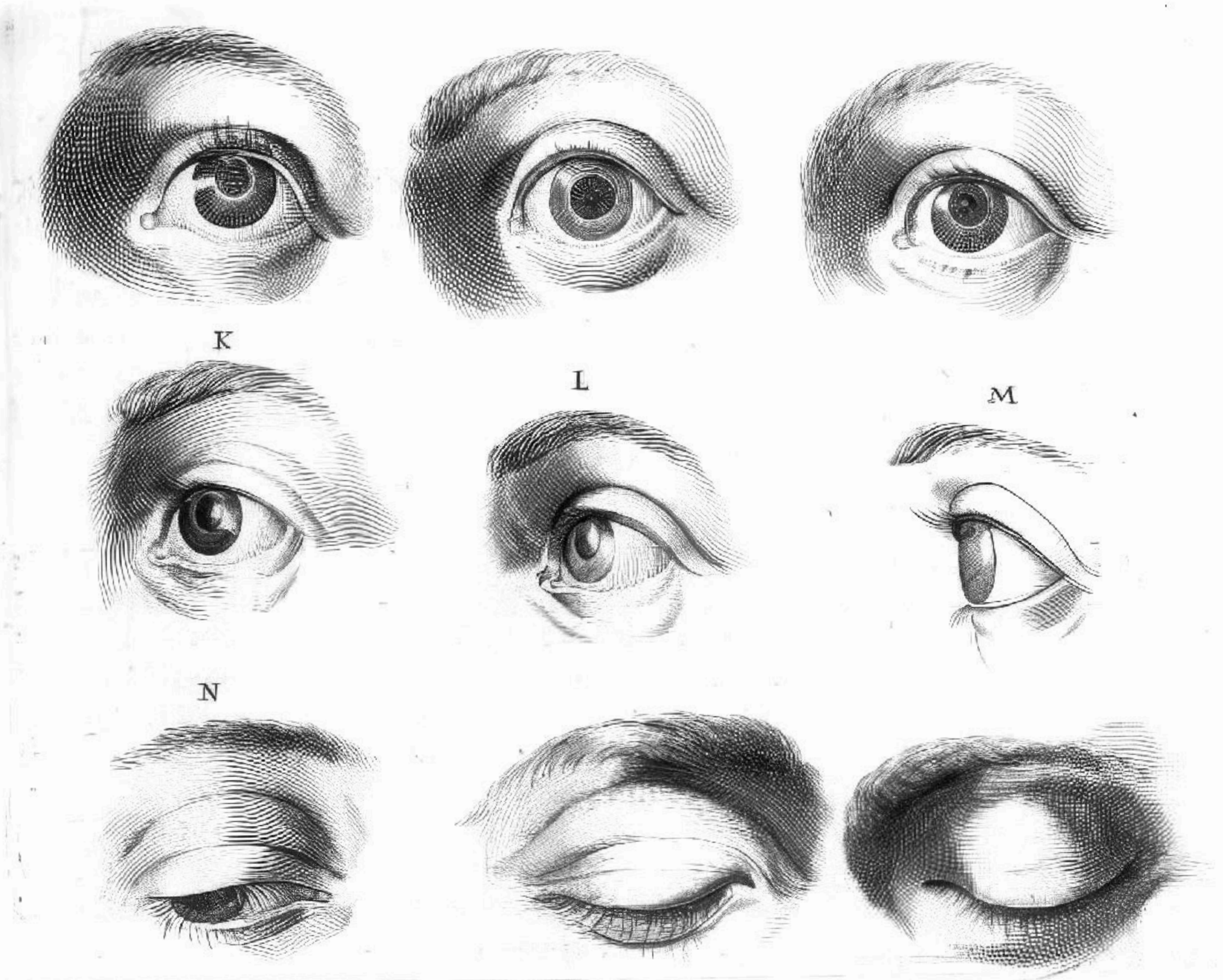
VI

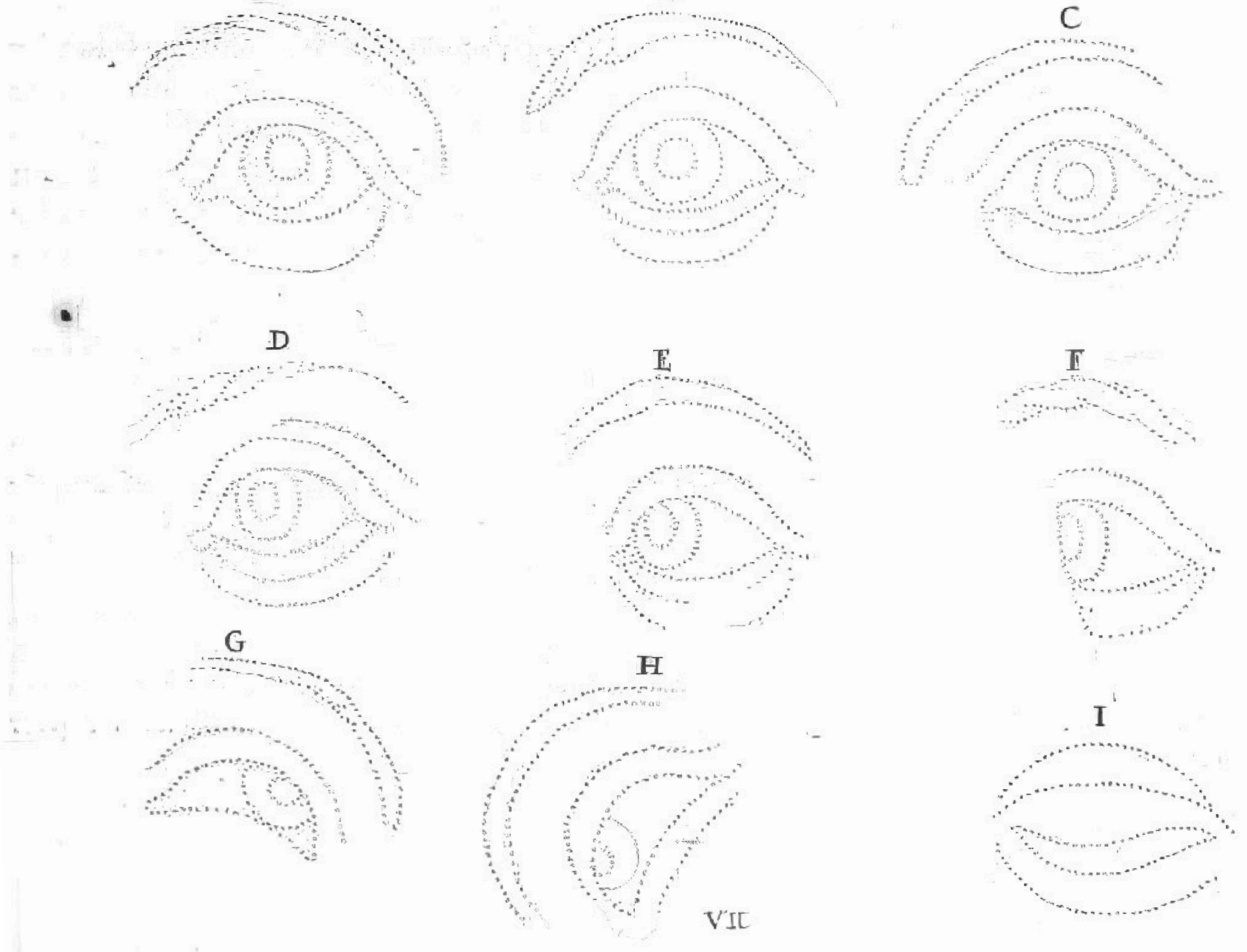
On Practice and Simplification

Now that I have described the proper method for drawing the face, the eyes, the nose, and the mouth according to the established rules of art, I do not wish to go further into extended discourse or bind the reader to a long list of mathematical rules.

Once these principles are clearly understood in the mind, there is no longer any need for more than a simple sketch, as demonstrated by the figures A–B–C–D–E–F–G–H and I–K–L–M–N, which show the eye in profile.

In the end, since all these figures are simply variations in point of view, there is no further rule required—only practice.





VII

Constructing the Ear and Understanding Its Placement

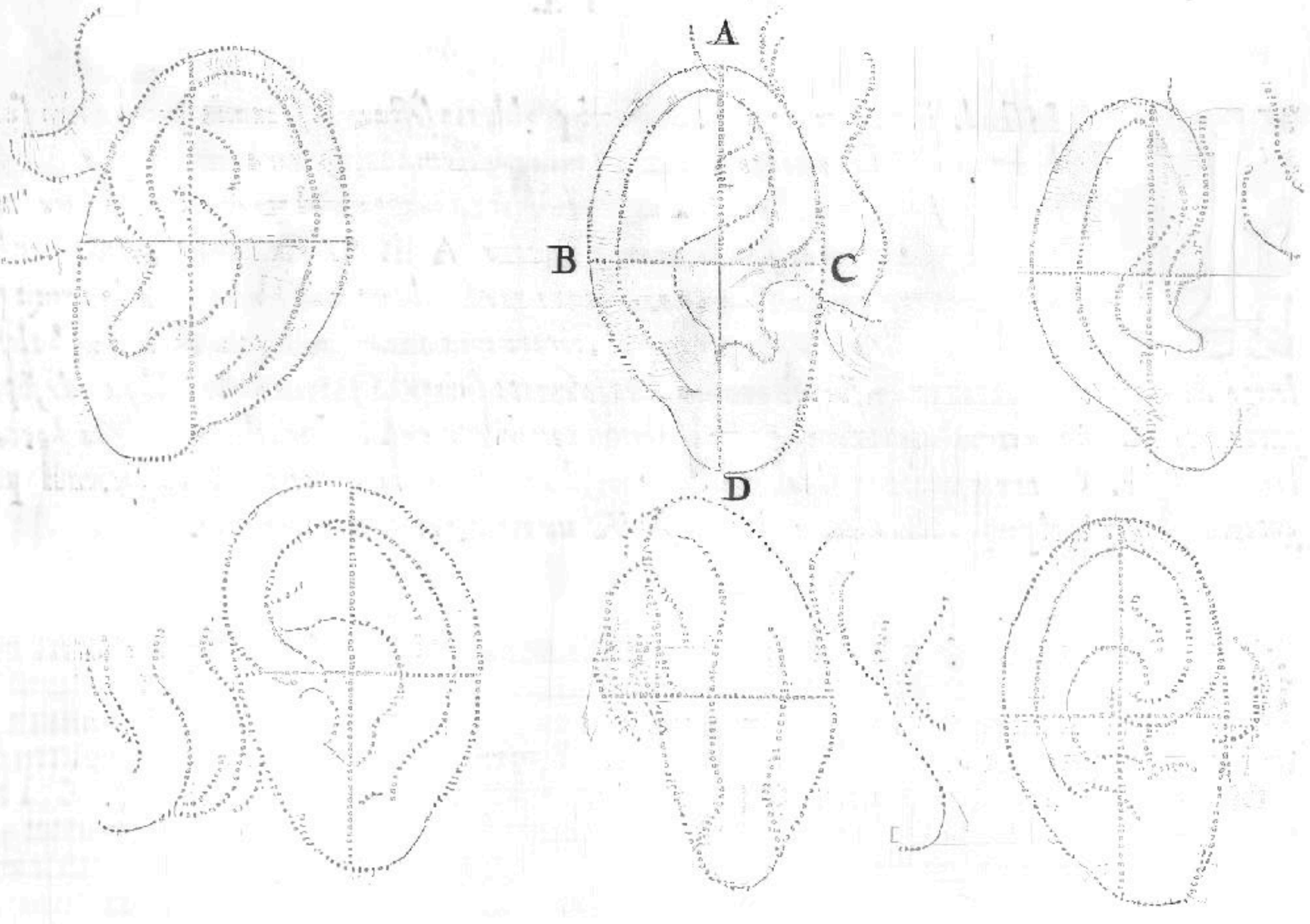
I have previously explained the proper order to follow in drawing the ears according to mathematical principles. Now, however, I would like to show you a simpler method—one that better illustrates the change of view.

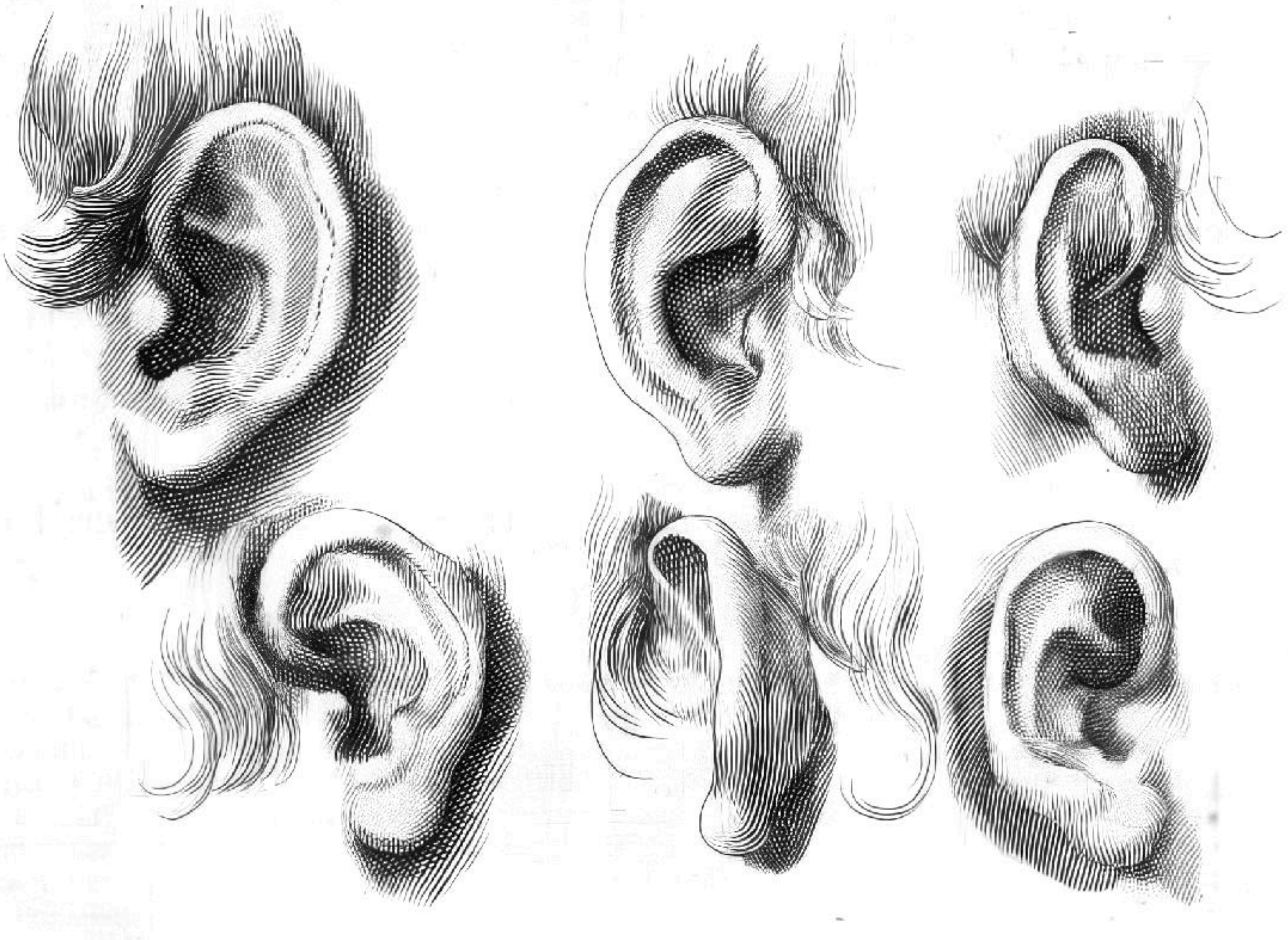
Begin in the following way:

Draw a shape like the one shown by letter A, and divide it into two equal parts. Using this, you will find the correct placement of the ear along the line marked B–C–D.

If you wish to draw the ear in profile, take half of the figure A, and inscribe it into a slightly elongated oval. In doing so, you will easily find the correct and natural form of the ear.

Once you have carefully drawn it with charcoal, take a fine cloth and gently rub away the initial sketch lines. Then, go over the drawing again with ink and pen to complete the form.





VIII

Sketching the Nose and Mouth

Since the nose, as I mentioned in the sixth problem, is the second principal part of the face, and I have already explained it clearly in the third problem, I will not expand upon it further here. I will simply show how it should be sketched.

When you want to draw a nose seen from the front, begin with a shape as shown by the letters A–B–C. The point marked C indicates a slightly raised nose.

To draw the mouth—which is the third principal part of the face—proceed as follows:

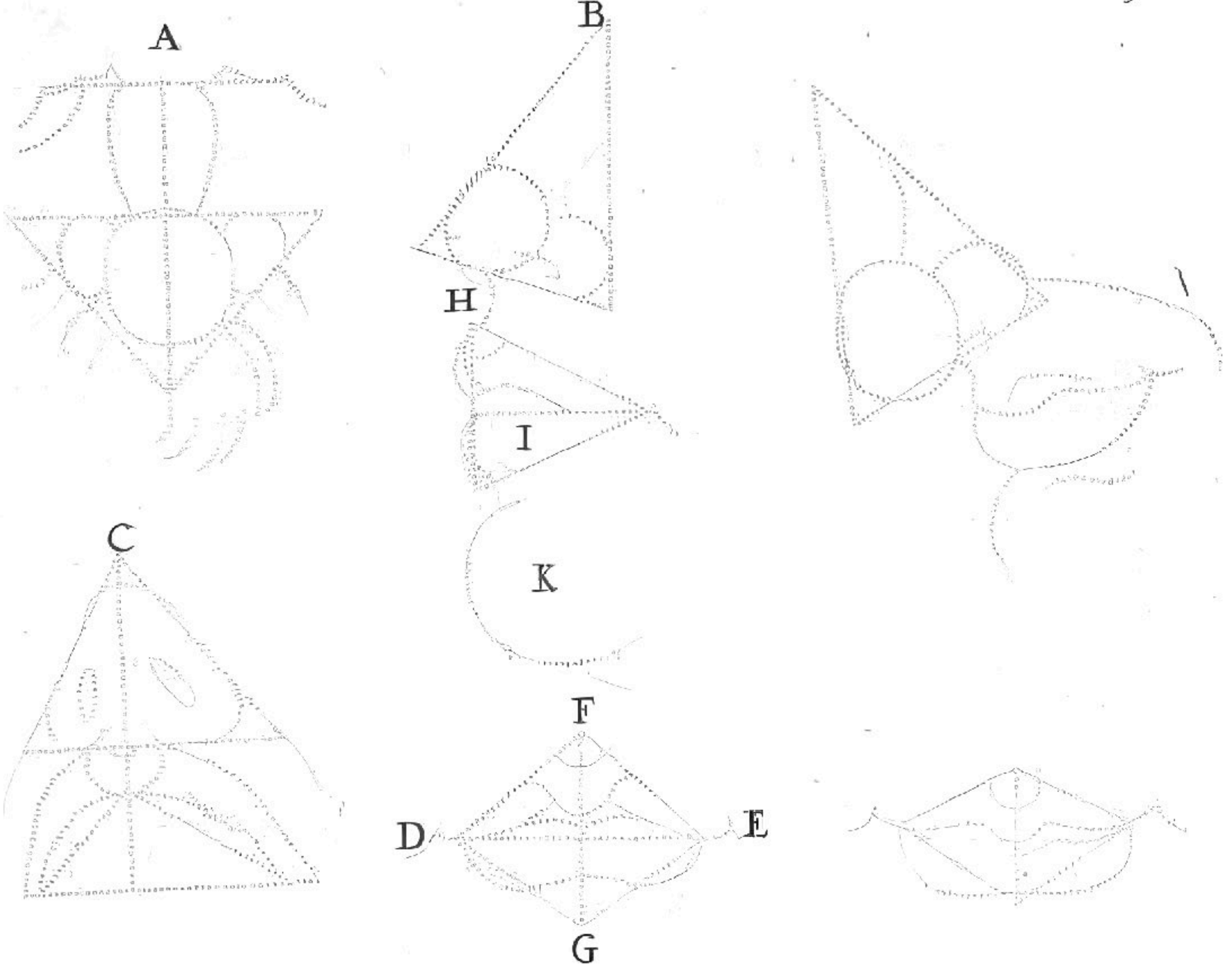
- First, draw a line shaped like the arc of a crossbow, as shown by D–E.
- Then, sketch a rectangle beneath it as a base form.
- From this, you will quickly find the shape of the upper lip.

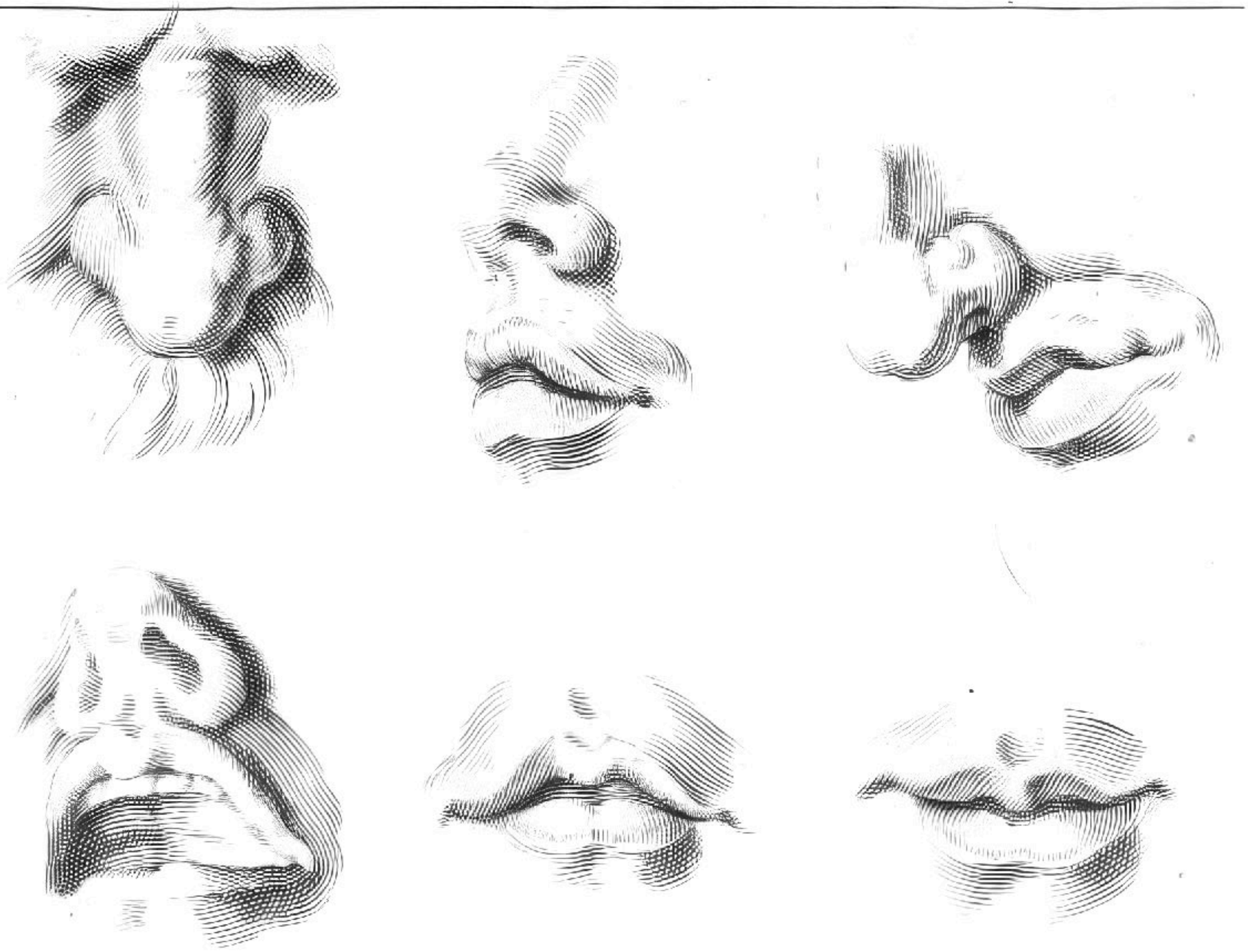
Next:

- Use a small half-circle at point F to mark the Philtrum (the groove between the nose and upper lip).
- Points D and E also define the outer corners of the mouth.

Then:

- The letter G marks the lower lip.
- Letter H indicates the midpoint of the Philtrum.
- Letter I shows how to construct the mouth in profile,
- And finally, letter K denotes a half-circle to suggest the form of the chin.


A
B
H
I
K
C
F
D
E
G



IX

Sketching the Head in Profile with Varied Viewpoints

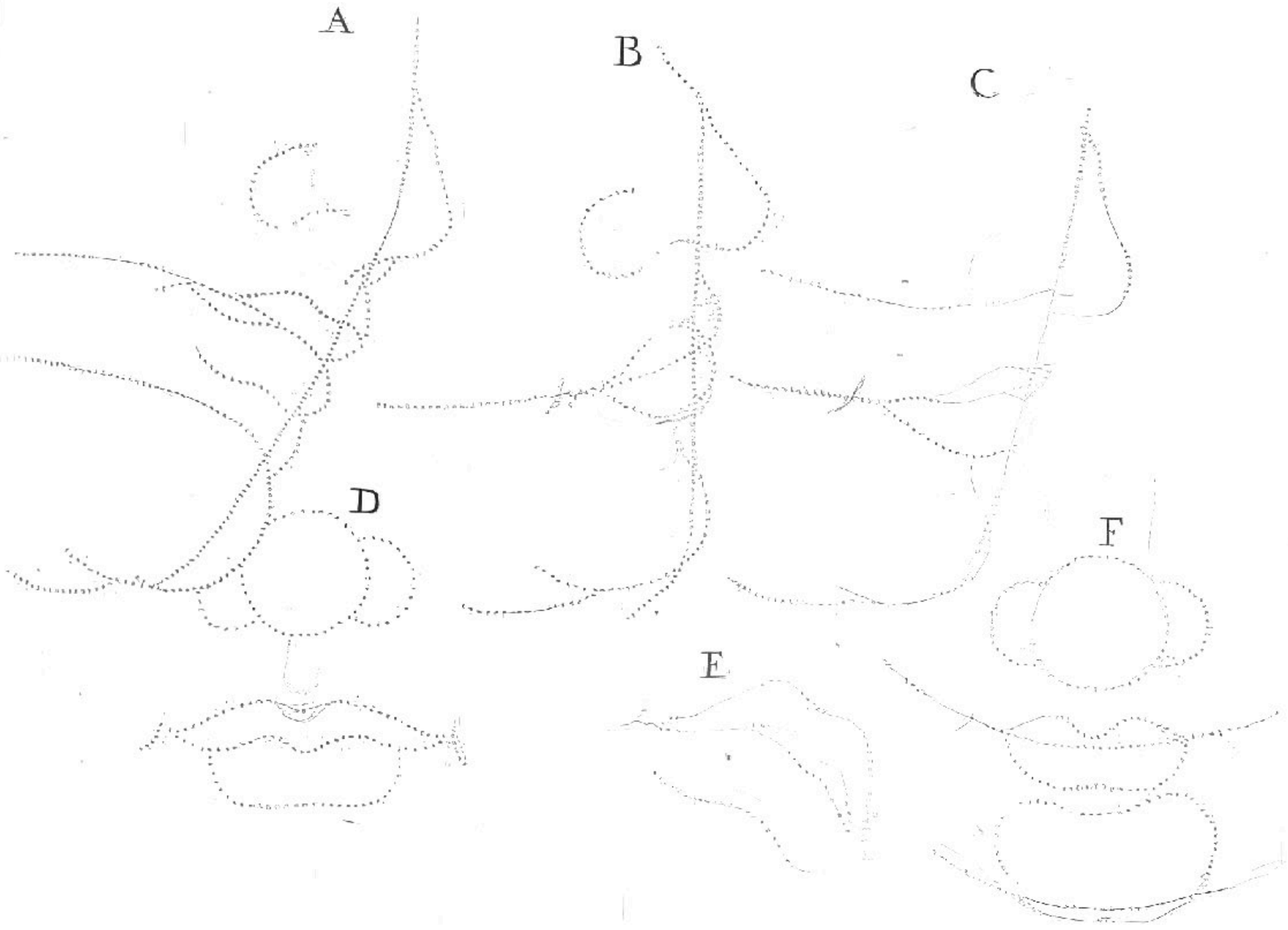
This figure represents nothing more than a change in the appearance of the subject due to different viewing angles—some slightly more raised, others somewhat lower. These changes are slight, but they matter.

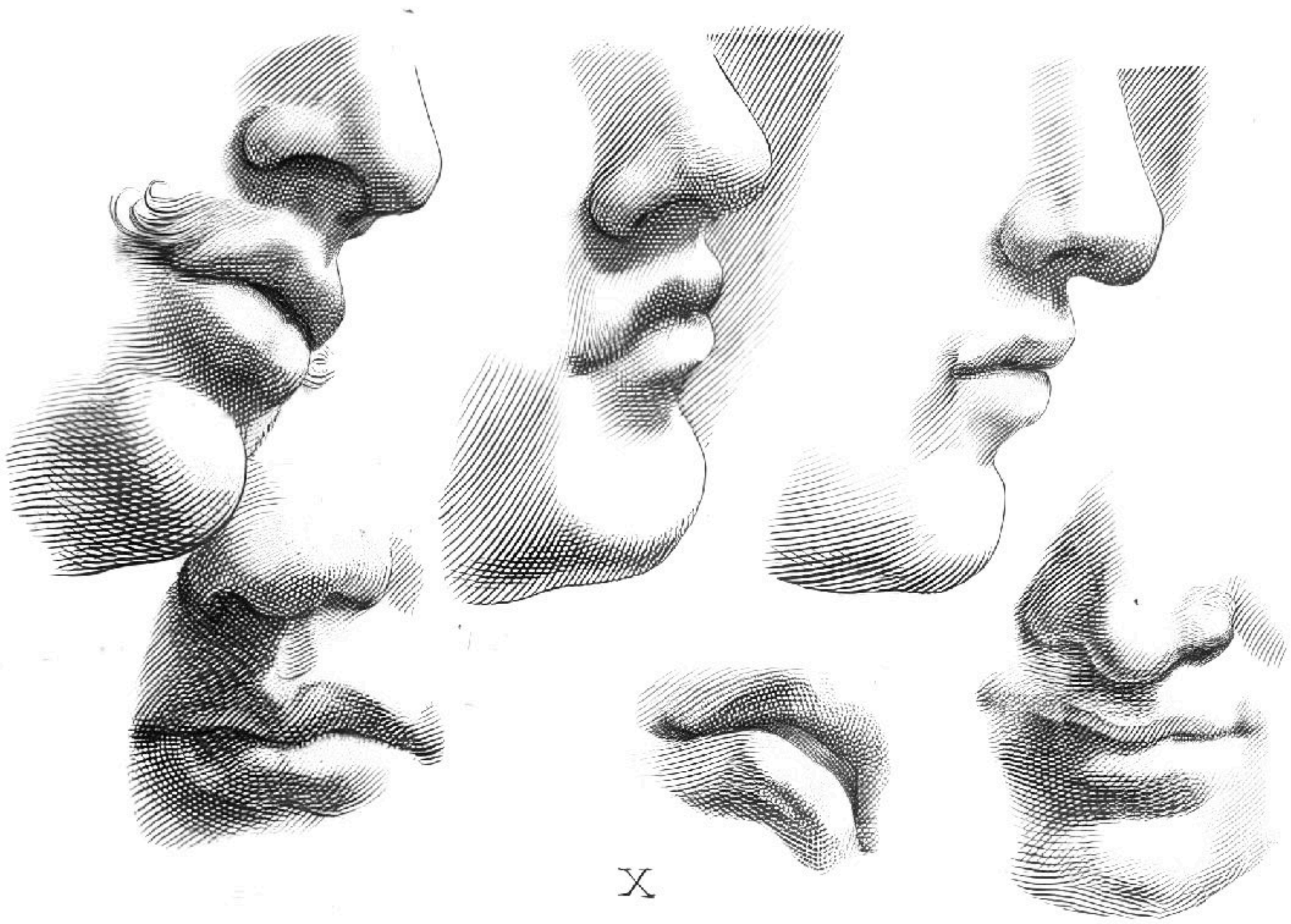
For the moment, I am teaching only how to sketch faces in profile, as demonstrated by the letters A–B–C.

- The lines B–C show a view that is slightly from below,
- While C leans to the opposite side.

Therefore, if someone wishes to draw one of these profile views, they must pay close attention to the lines, and carefully observe how to position the nose and mouth, as indicated by letters D–E–F in the figure.

In time, I hope to treat this subject more fully.
But for now, this is enough to learn the proportions.





X

Understanding the Head from Varying Viewpoints

I have not found it necessary to write lengthy discourses about the three primary changes in viewpoint, because I believe it is better not to complicate the matter, but instead to teach a simple and practical method.

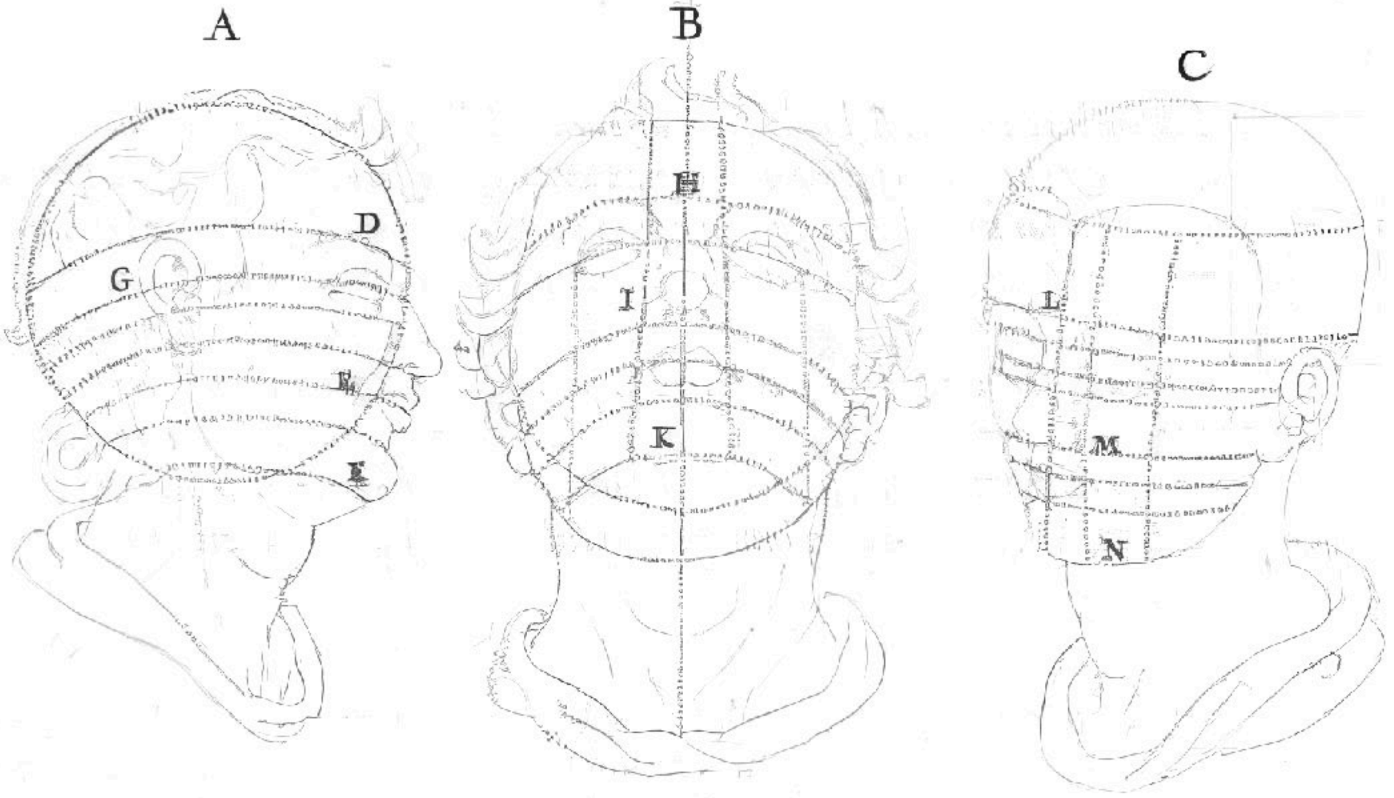
So, begin by drawing an oval, as shown by the letters A–B–C.
Within this oval, the lines are bent or curved, like half-circles, due to the natural roundness of the forms. These curves follow one another as shown by the lines D–E–F.

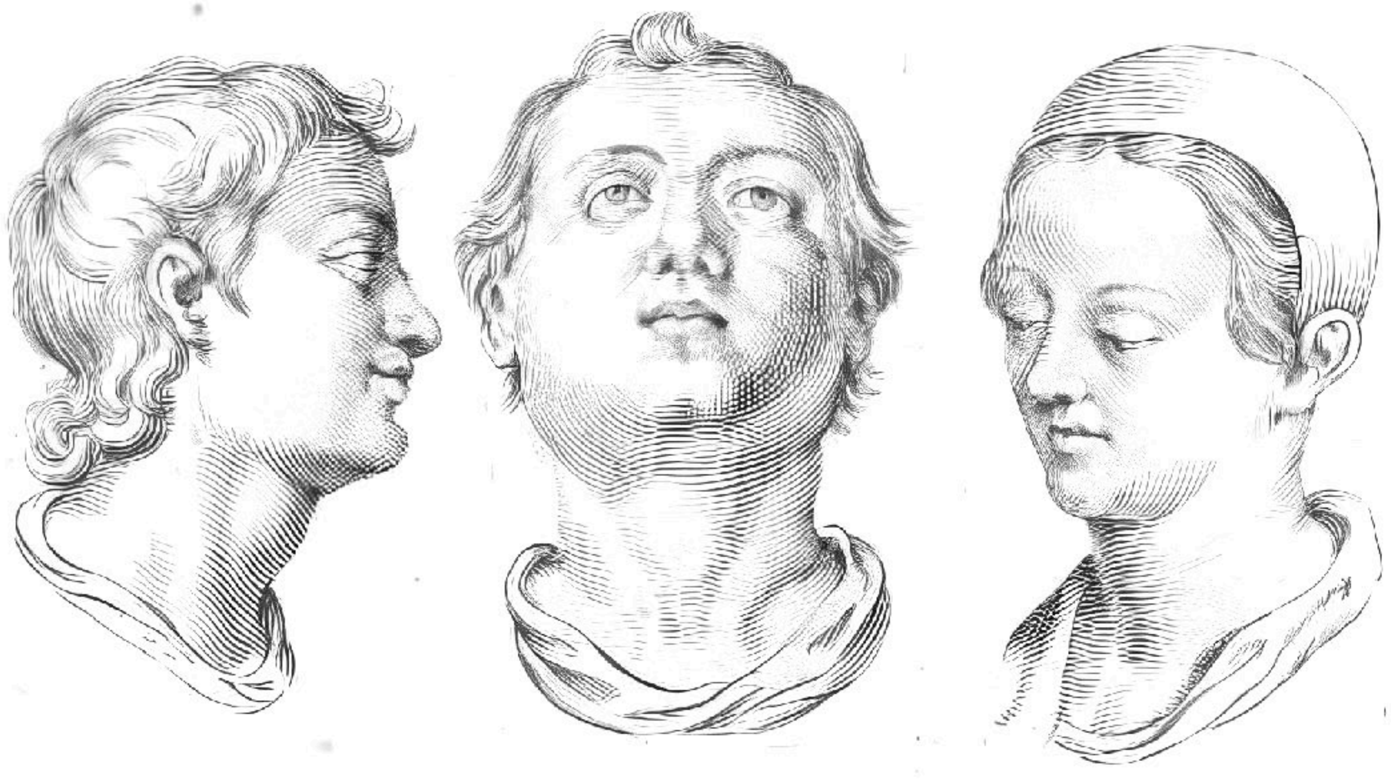
The point G marks the position of the ear, which should be placed at a distance of one eye's width from the outer edge of the eye. This is the correct proportion.

Thus, I adjust my figures using the lines H–I–K.
Even though these may appear like a simple sphere, they fit correctly within the oval, just as the figure L–M–N does.

This rule should be observed in all heads, regardless of how their orientation shifts in our view.
The same applies to the vertical lines, such as K–L.

This will be enough said for the present on this topic.


A
B
C
D
G
E
F
H
I
K
L
M
N



XI.

Drawing the Head of a Child

Because the heads of children differ in proportion from those of adults, and because their forms have not yet reached full development, I will now show a simple method for accurately sketching them.

Begin by drawing a shape like the one shown in my third problem, figure A–B–C–D, which I call a square. Divide it again into four equal parts, marked E–F and G–H—these lines will help you place the eyes.

Then draw inside the square an oval, fairly round and soft in shape.

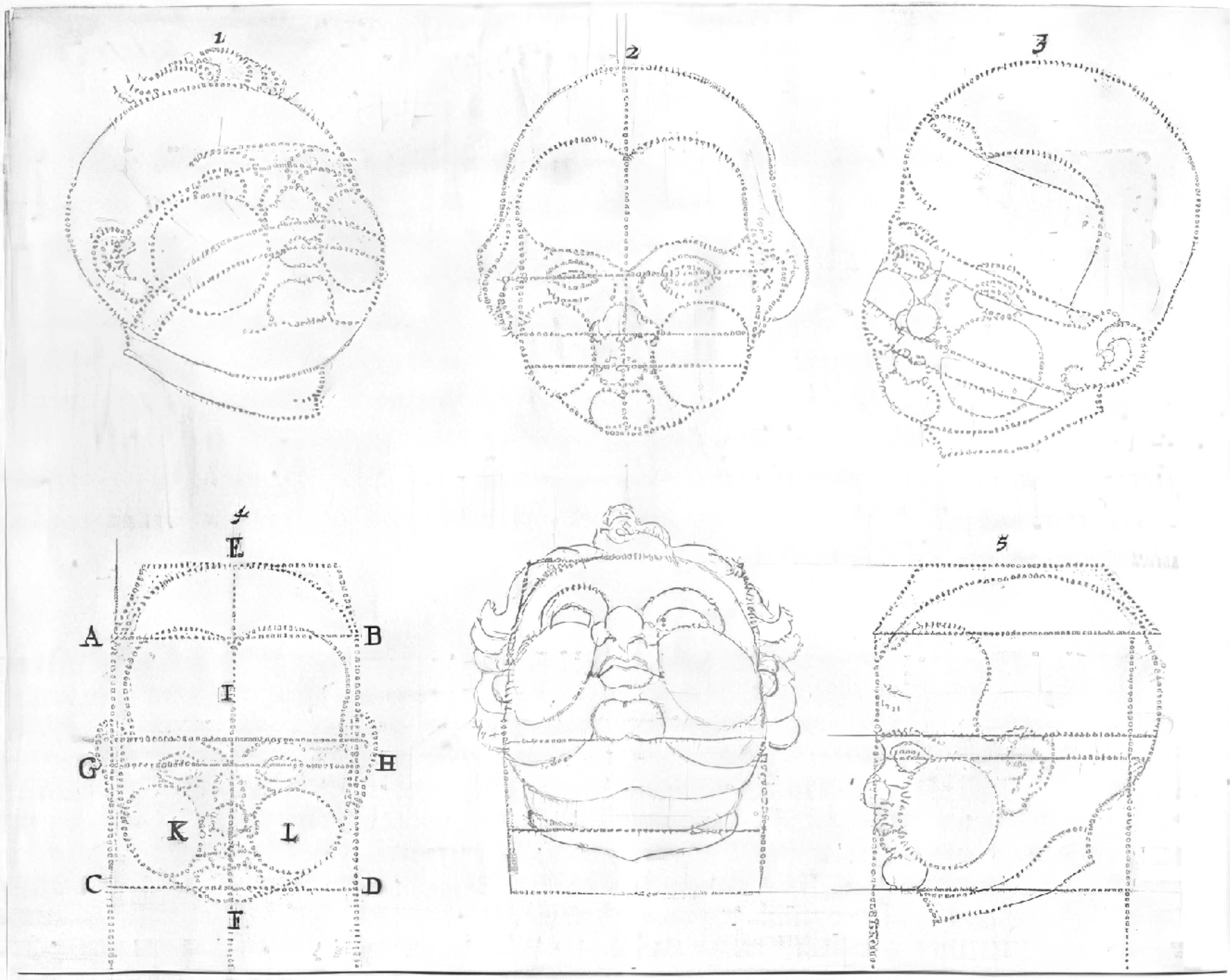
Use the following guides:

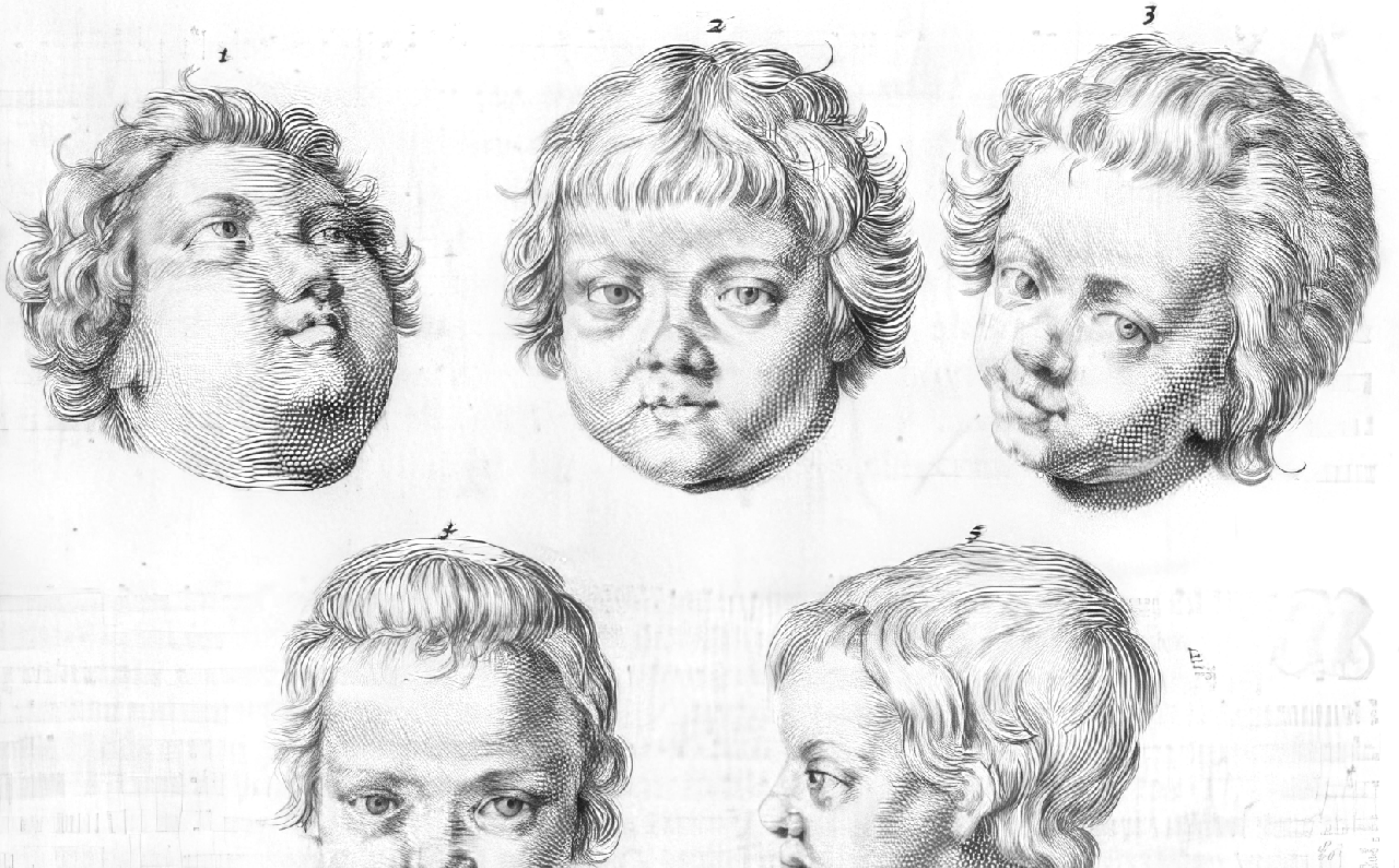
- I–J for the forehead
- K–L for the cheeks
- M–N for the placement of the nose
- O–P for the small mouth
- C–D remains for the chin

Following this method, you will also find the correct construction for the profile view, shown as face Q. This follows the same proportions.

In face R, the view simply changes direction, and the lines curve and rise slightly, as the head turns to the side.

With this, I believe I have now said enough about the heads of children.


1
2
3
4
E
A
B
I
G
H
K
L
C
D
F
5



XII

Studying the Skull and Its Underlying Proportions

Having already spoken at length to young students about the proportions of the face and head, I will now present four skulls, to show clearly the foundation of the form, which retains the same proportion described in my earlier Problem B.

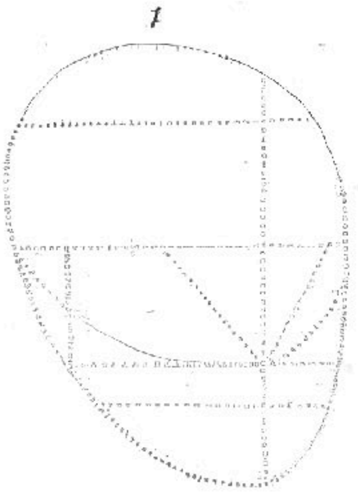
To construct the first skull, begin with an oval, and divide it into two equal parts using the line A–B.
Then divide it into three additional segments:

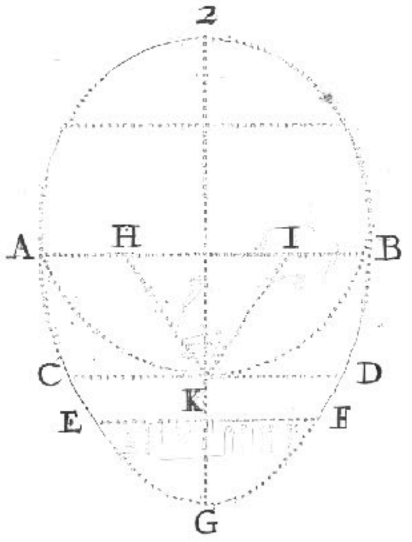
- From C to D,
- From E to F,
- And finally, G marks the chin.

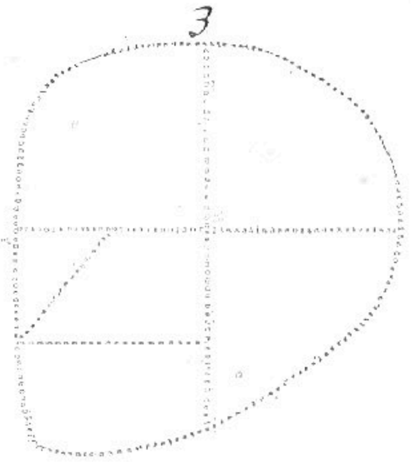
If you wish to find the opening of the mouth, the placement of the teeth, and the position of the eye sockets, draw a line from K to H, and then from K outward—these lines form a precise triangle.

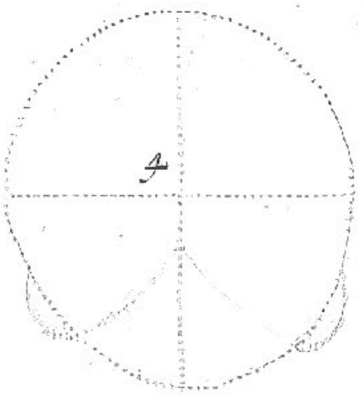
You will observe that these skulls, even as their orientation changes, maintain the same proportional relationships.

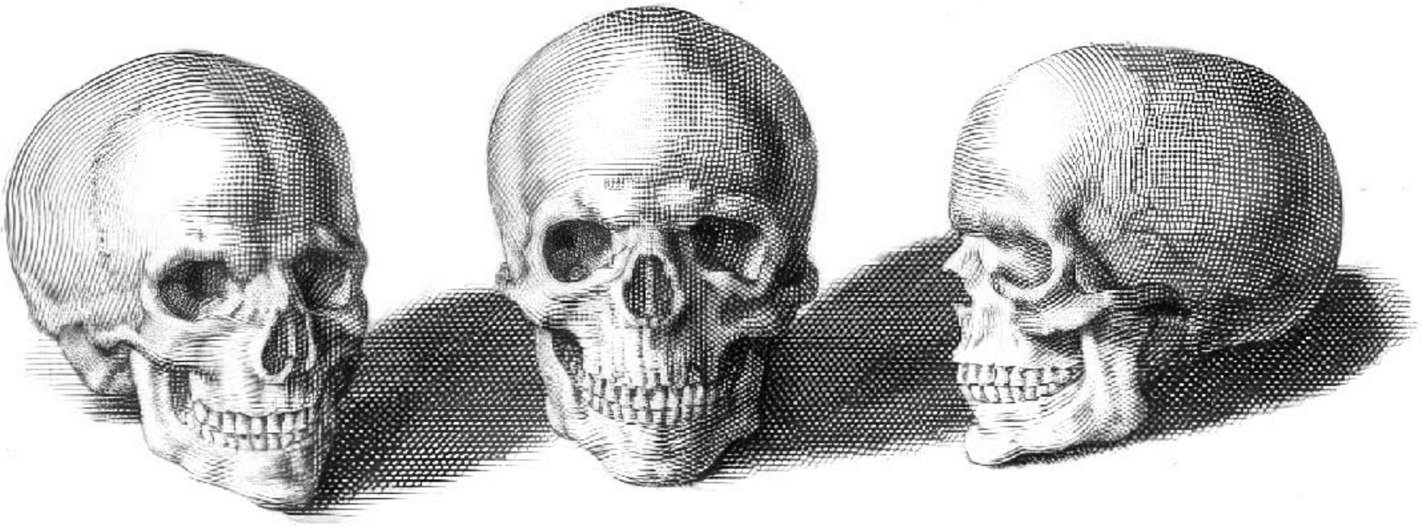
And with the number 4, you will see that a skull turned from behind still retains the same circular construction I demonstrated in my Problem 5.

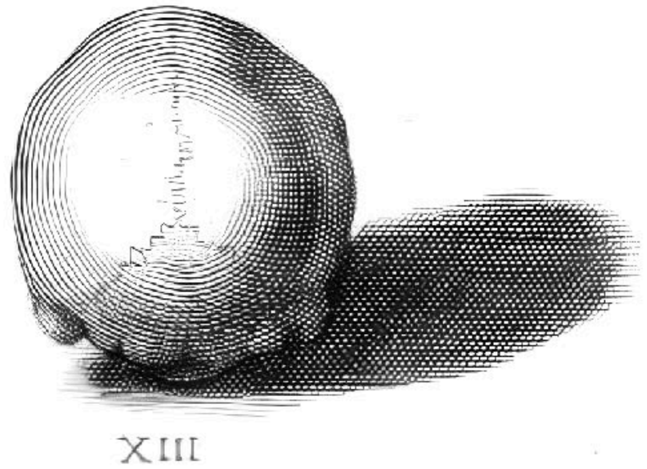



2
A
H
I
B
C
D
K
E
F
G









XIII

Constructing the Hand: Outstretched Form

It is not my intention in this section to treat in full the measurements of the body—that will be addressed in the second book of my Academy.
Here, I only wish to show the principles for learning to draw.

Since I believe I have now spoken sufficiently about heads, faces, and their parts, I find it necessary to now teach, briefly, how to draw all types of hands.

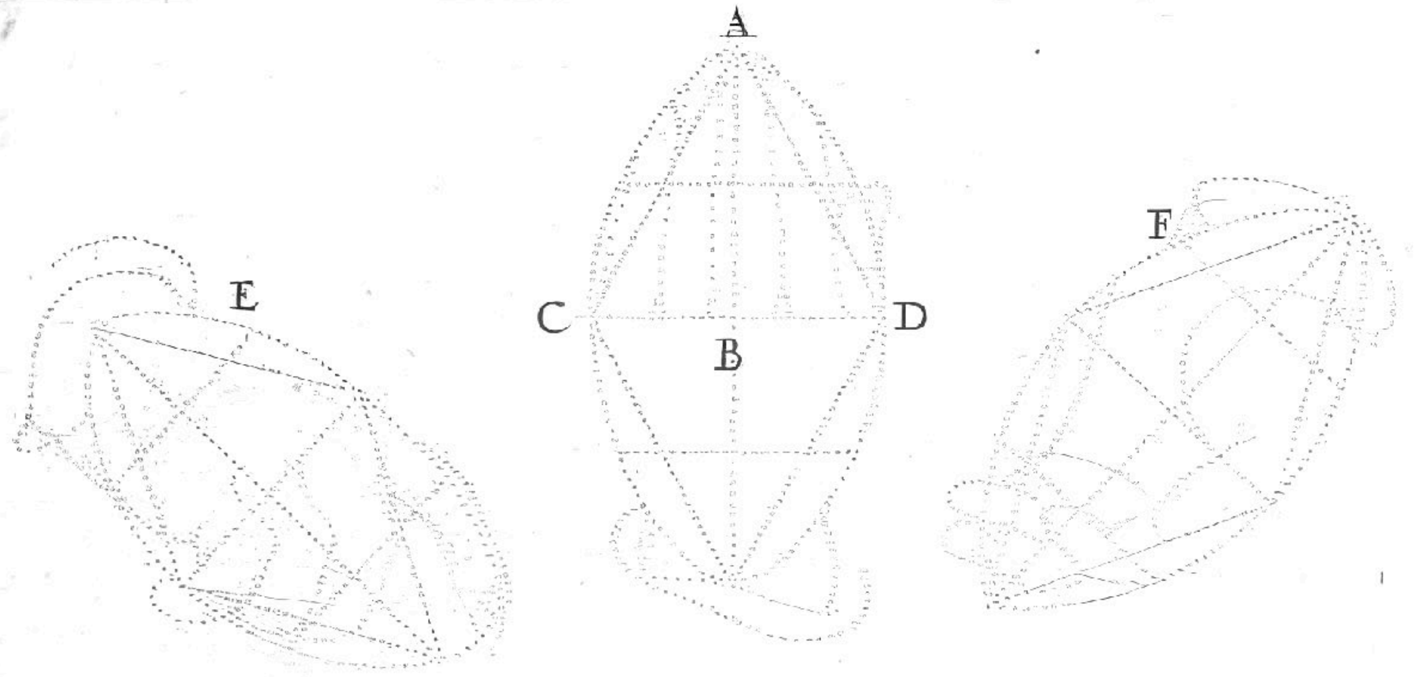
To begin, I will present an outstretched hand, as shown in the figure marked with the letter A.

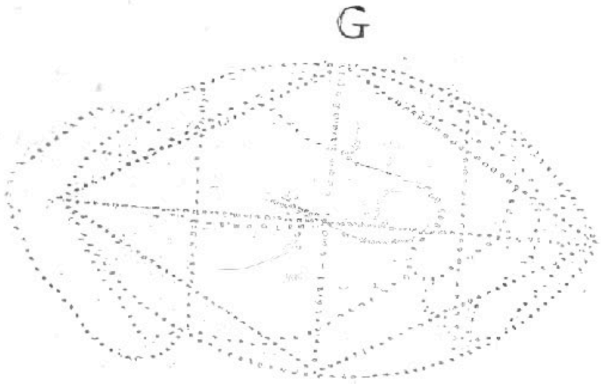
This hand can be described using either a square or a long oval, and you will observe that:

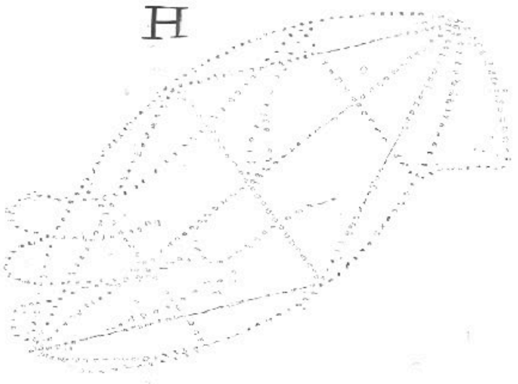
- The longest finger, extending to point B,
- Corresponds to the true width of the hand, marked C–D,
- And also defines half the total height of the hand, from A to D.

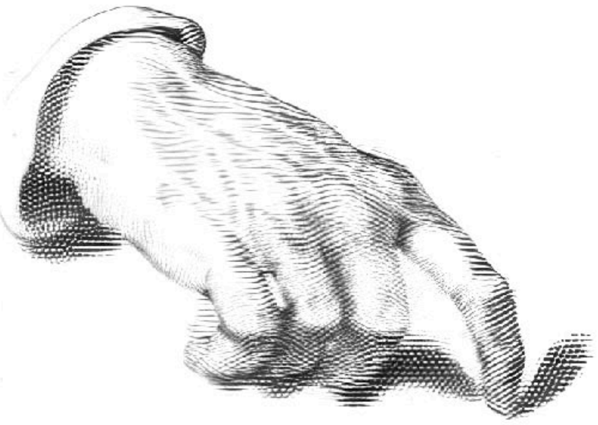
The segment C–D repeats this same proportion.

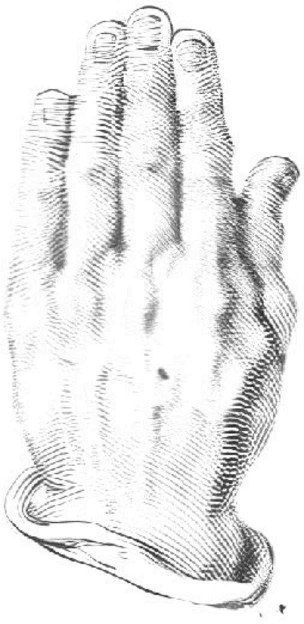
In the outstretched hands shown by E and F, you will see that the form of the hand does not change, but only the gesture—it shifts only by raising or lowering the fingers

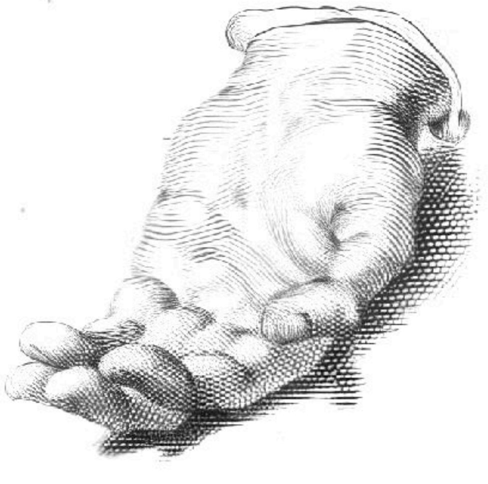


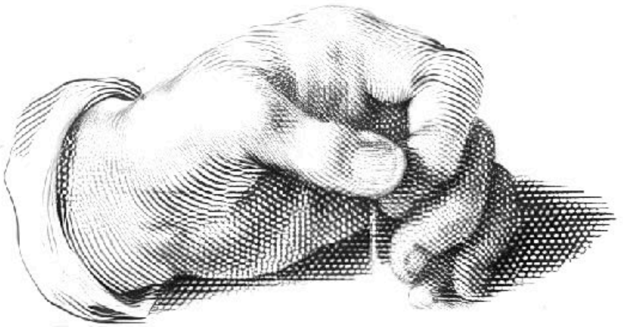


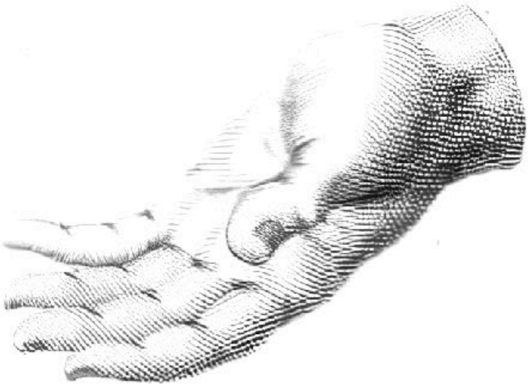












XIIII

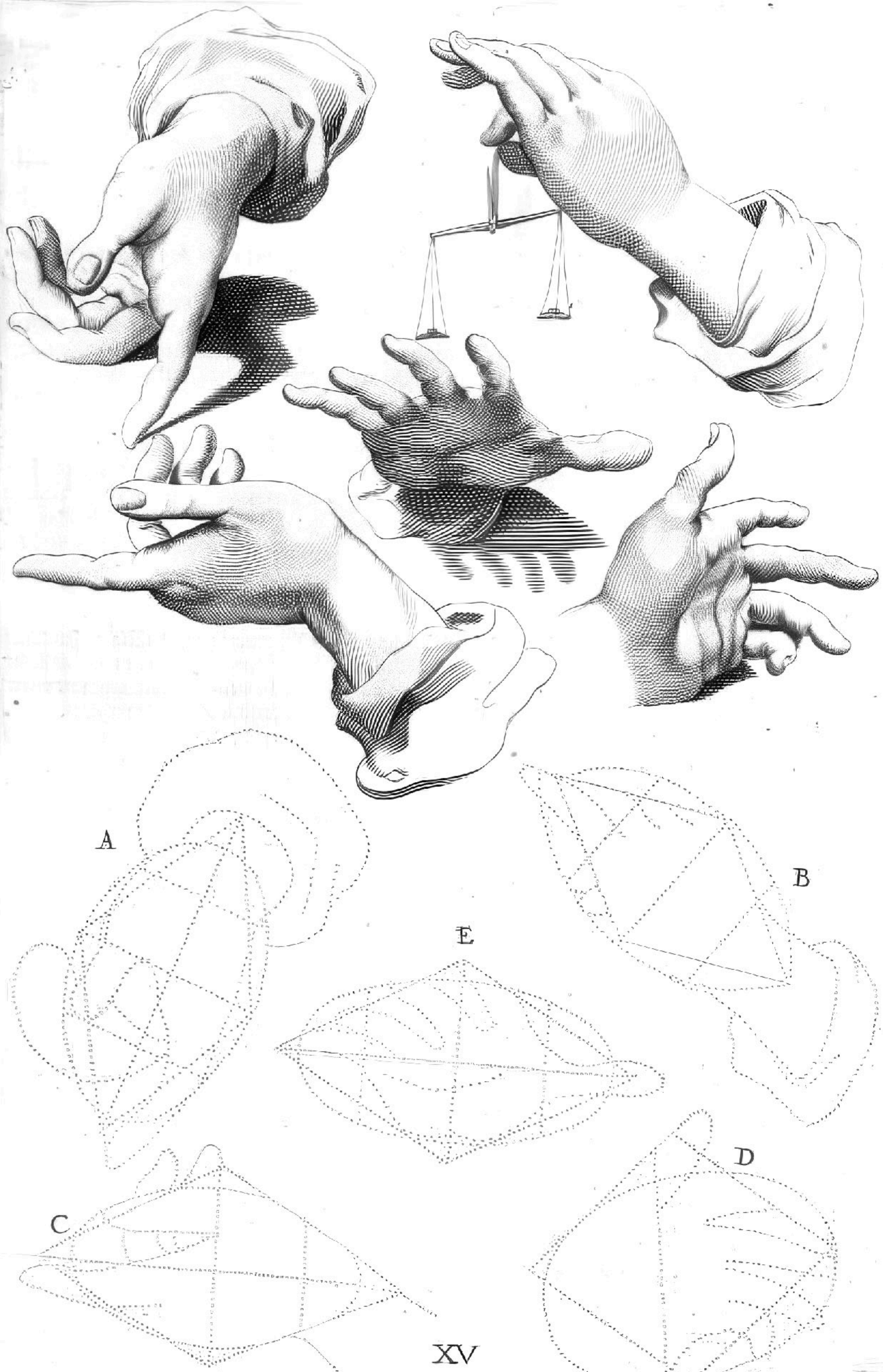
Sketching the Hand in Motion

Having already spoken sufficiently about the proportions of the hand, I will not demonstrate anything further here beyond the basic sketch, marked with the letter A.

In the same problem, you will easily see how the hands change and bend, as illustrated in figures B, C, and D.

Once the general form has been blocked in with charcoal, the fingers can be shaped within the square without much difficulty.

At times, the figures may appear elongated or shortened, because the fingers extend or bend, depending on the gesture.



XV

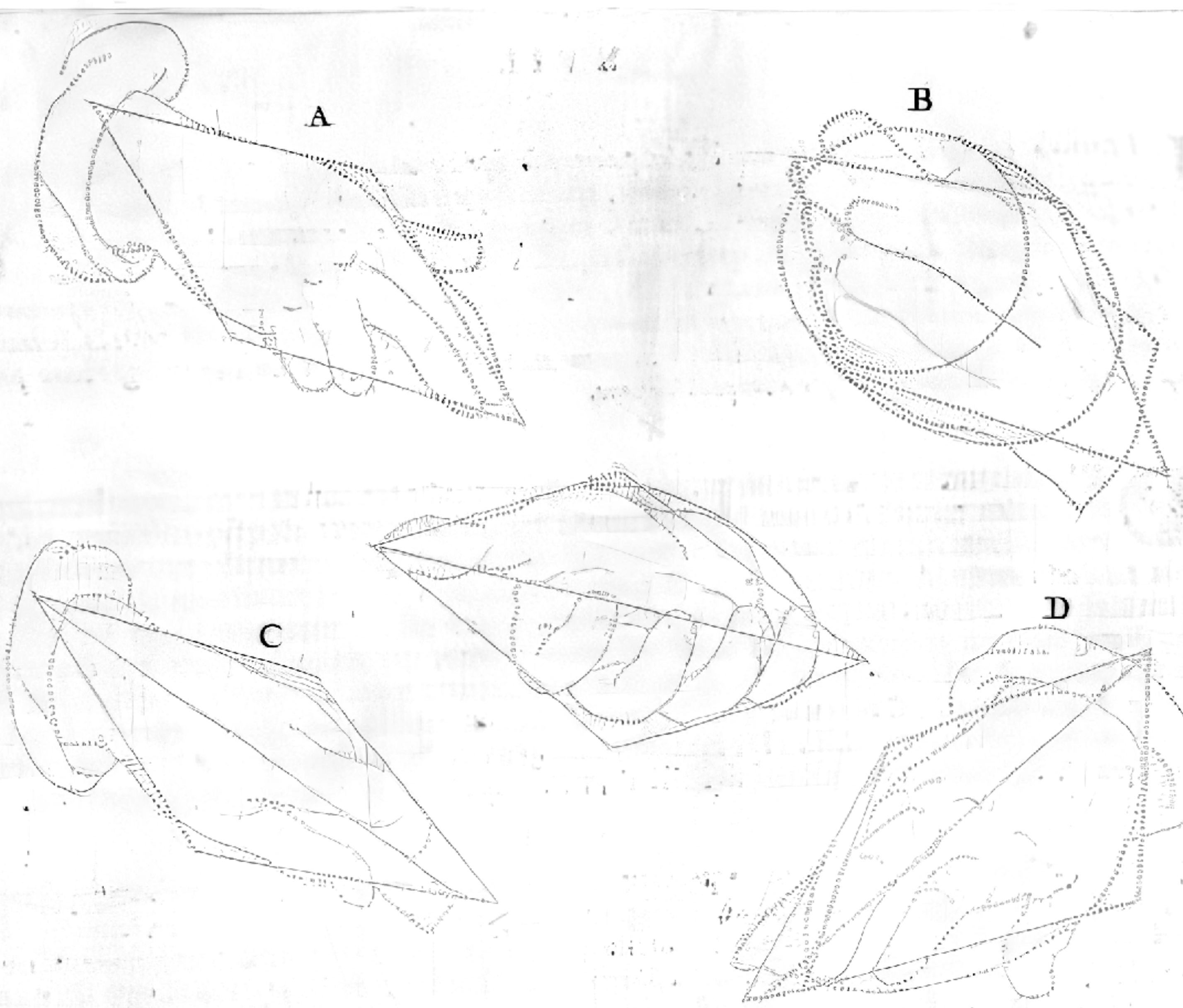
Four Simple Ways to Sketch the Hand

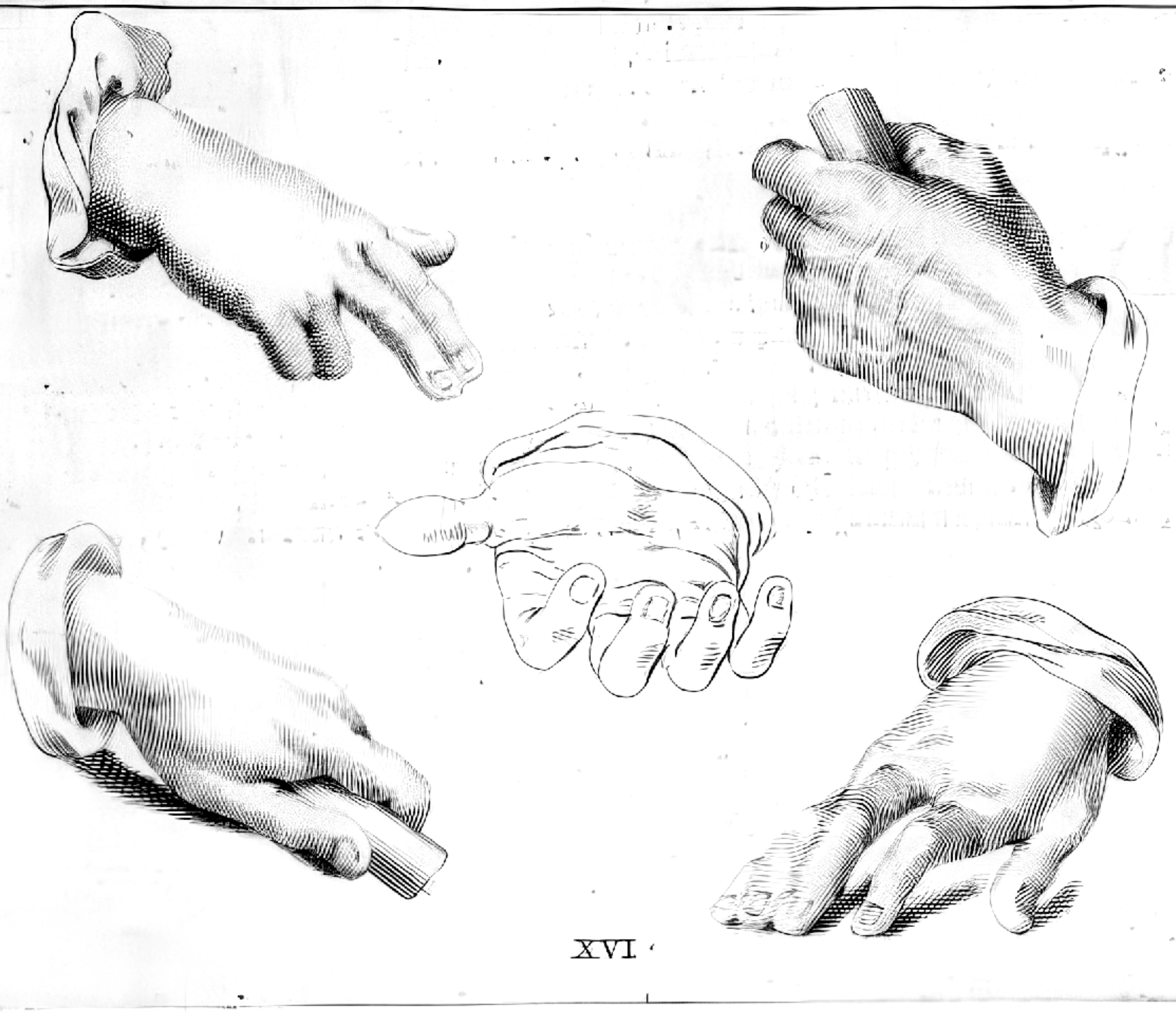
Because I intend to treat changes of position and the details of each part of the human body more fully in my second book, I do not wish at present to go further than to show, in this problem, only the simplest forms.

Here, I describe four basic ways to sketch the hand and its structure:

- The hand A, which I draw using the shape of a lozenge,
- The hand B, in a similar fashion,
- C, drawn in the same manner,
- And D, which is slightly more extended due to the stretch of the fingers.

I find that this method is the easiest approach for drawing hands clearly and with confidence.


A
B
C
D



Constructing the Feet with Geometric Simplicity

The feet are the pedestals of the body, and one of the principal members upon which man rests his weight.
After the face, they are among the most difficult parts to draw—especially the feet of women, which even experienced draughtsmen often confess they have found particularly challenging.

In my practice, I have discovered a simple method to approach this:

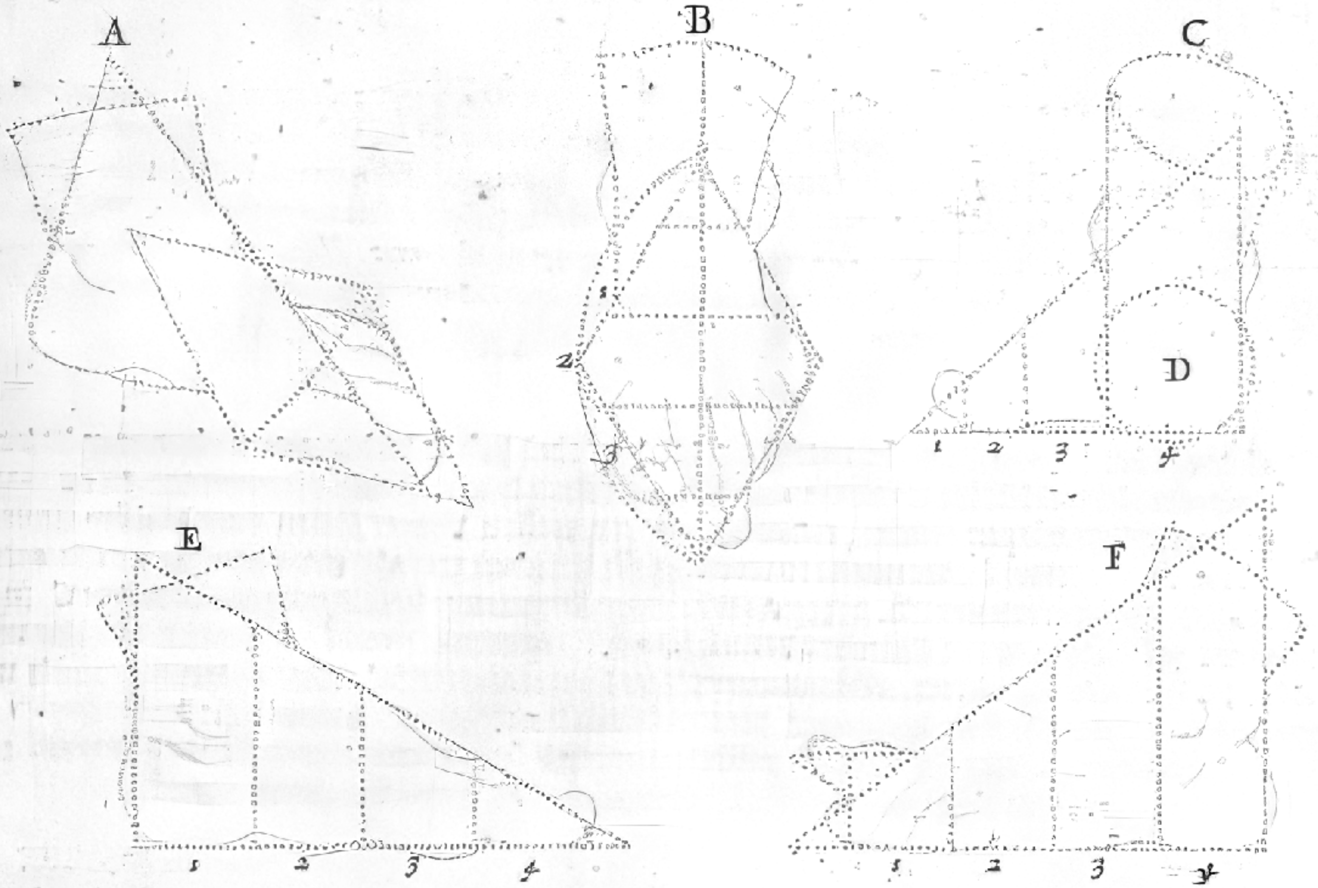
Begin by using a triangle and a rectangle, as demonstrated in figure A.

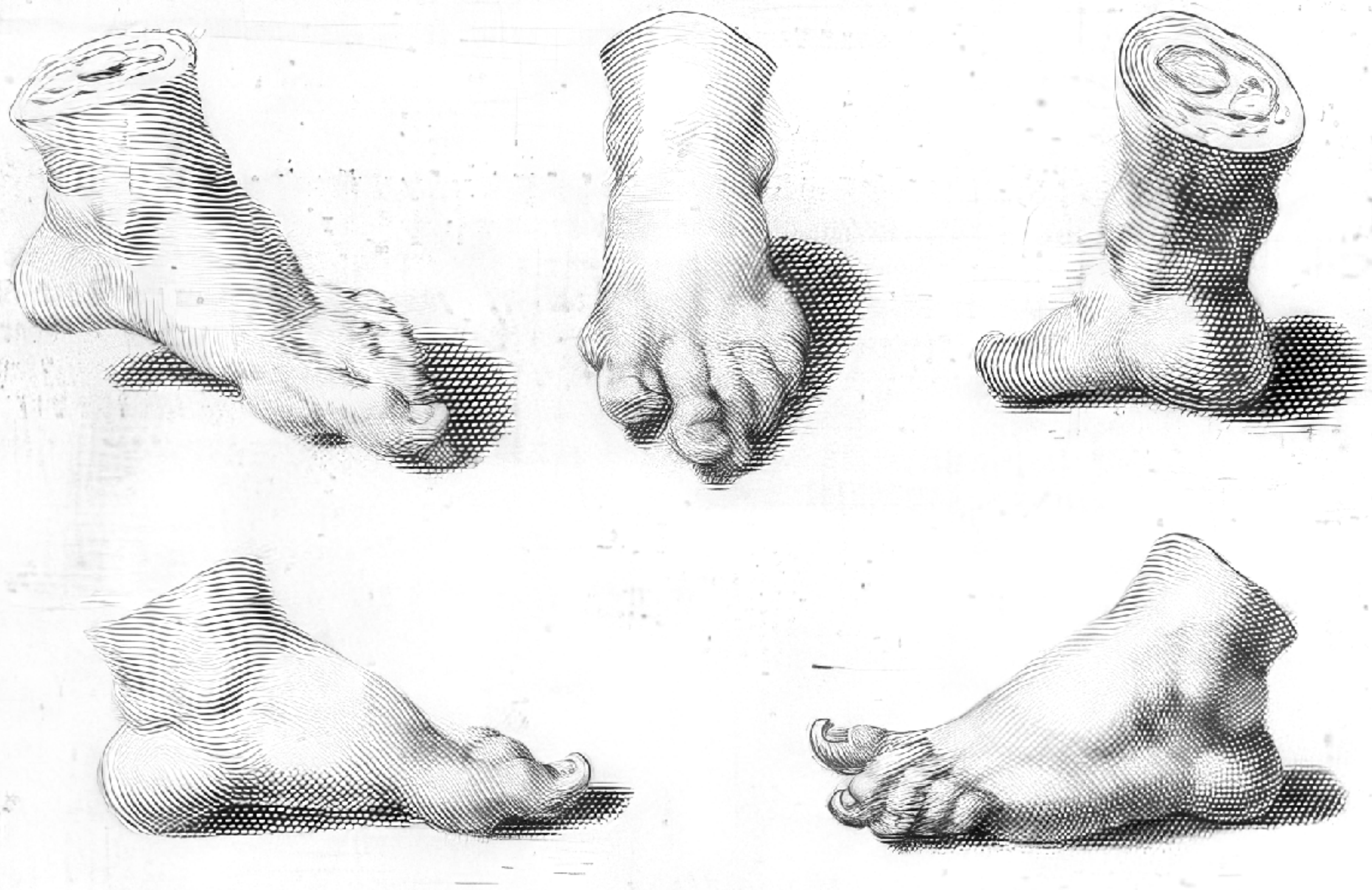
- The shape B is a long rectangle, upon which the lower leg rests.
- This rectangle is divided in half with a line, whose endpoint aligns precisely with the placement of the big toe.
- From this, the other toes can be easily constructed within the same form.

For the foot turned backward, follow this method:

- Make a triangle with a circle inside it, as shown in figure D,
- The circle should just touch the two parallel lines of the triangle.
- In this way, the foot's volume is formed.

The forms E and F are constructed using triangles, as will be more fully explained in Problem XVIII, which offers a separate definition.


A
B
C
D
E
F
1
2
3
1
2
3
4
1
2
3
4
1
2
3
4



XVII

Simplified Forms for Drawing the Feet

Since I have already explained, with sound reasoning, the correct method for drawing the feet, I will now present only their outward forms and appearances, and the manner of sketching them.

To draw the first foot, begin with a shape like the one marked A.

Because nothing in the world exists without some correspondence to mathematical forms, I therefore describe:

- The foot B as a long triangle,
- The foot C as a square, as already described,
- And foot D, which shows the sole of the foot turned from behind, as a circle combined with a long rectangle,
    - Across which runs a line dividing the sole into two equal parts.

The middle foot, shown turning backward, is formed using a circle and a triangle.
The foot F mirrors foot D, holding the same structure.

With this approach, one may easily learn to draw all types of feet one wishes.Constructing the Legs and FeetSince I have already shown how to properly draw the hands and feet, I will now go further and explain how to draw the legs and feet together, in order to eventually construct the entire figure.

Because the legs are like the columns of the human body, we shall begin with them.

The leg and foot, from the hip down to the knee, make up one fourth of the body. Begin sketching them in the following way:

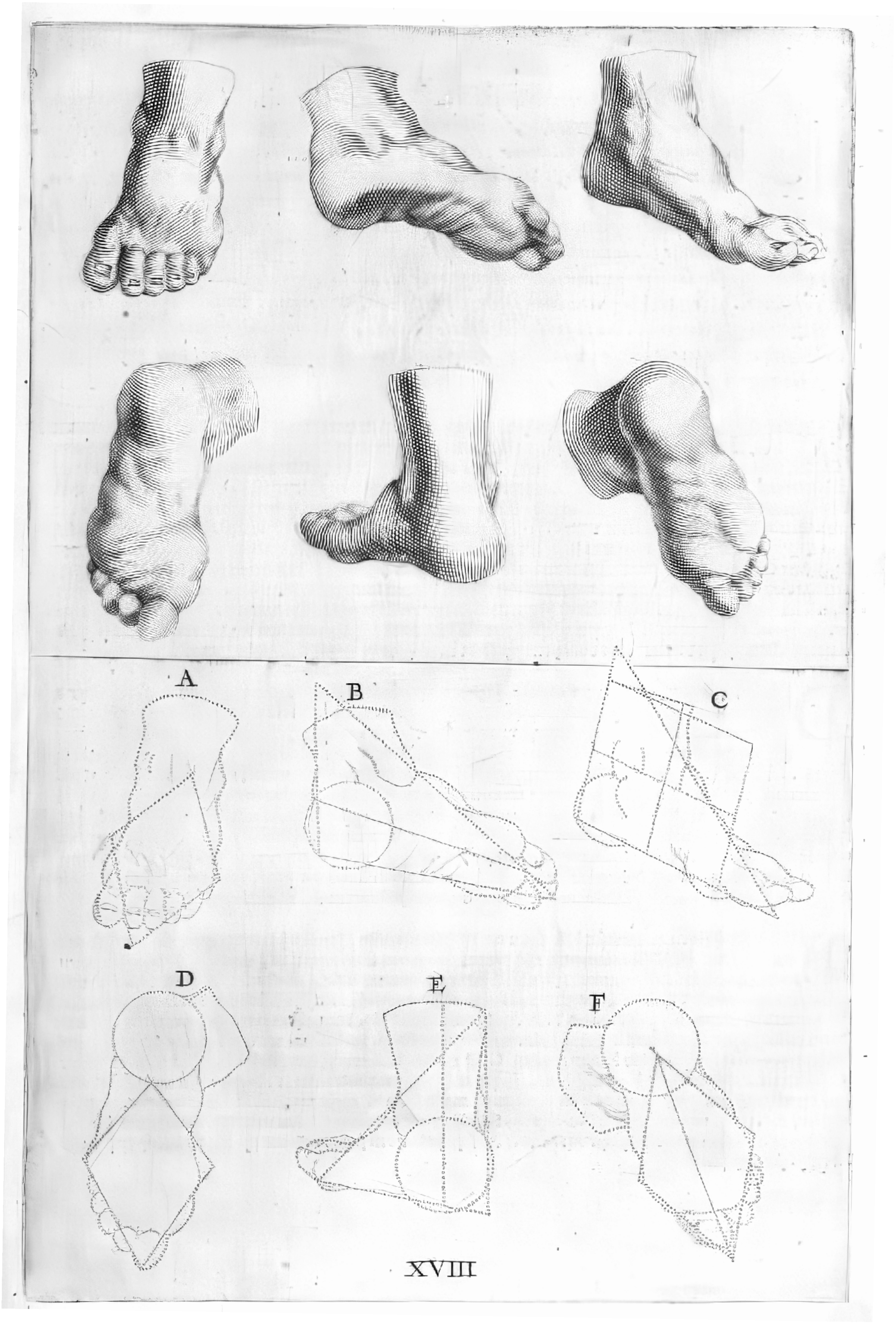
- First, draw a shape like the one shown in figure A—this will serve as the trunk of the body.
- Then add a triangle, divided into three parts:
    - One part for the heel,
    - Another for the ankle,
    - And the last for the beginning of the arch of the foot, to construct figure C.

To draw the leg turned backward, follow the same principle.

- Begin with two parallel lines,
- Then add a circle (for the joint) and a triangle,
- This is necessary to shape the sketch correctly.

Once this is done, you will observe how foreshortening functions—how the foot may turn and shift its position.

As for the figure marked E–F, proceed in a similar manner.
The only difference comes at the bottom of the leg, where you should draw a lozenge or elongated oval, and sketch the foot inside it. This will give you the correct basic form.

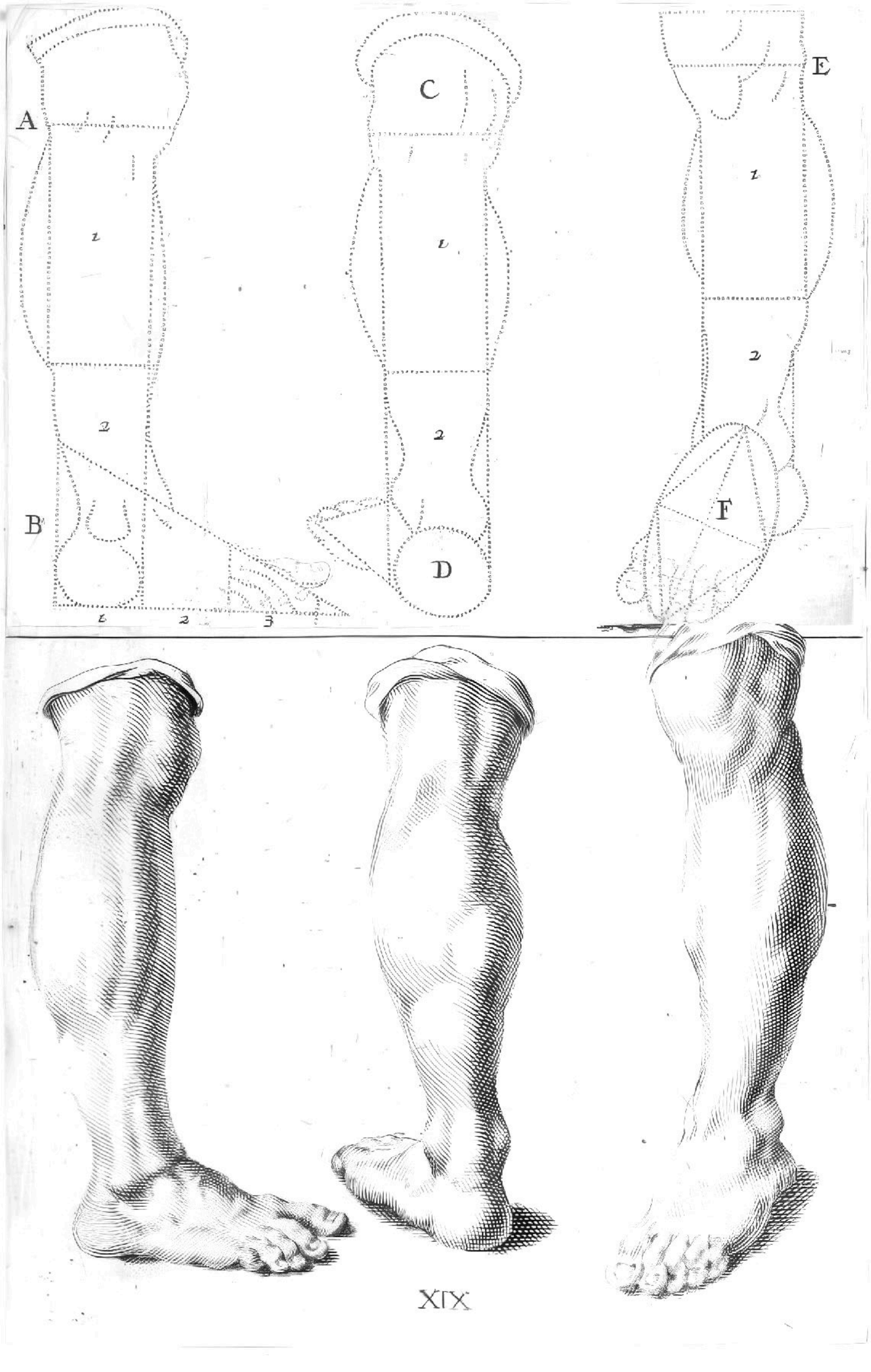


Drawing Legs and Feet in Anatomical Detail and Ink

Having already explained in Problem 19 how to sketch the legs and feet, it is now fitting to show how to render them cleanly in ink.

I have therefore found it necessary to represent them in anatomical form, or as surface structure, as shown in figures A, B, and C. This is to help young students gradually learn to recognise the muscles and their surface definition.

Once the form has been sketched with charcoal, as shown in figure 19, it can be more easily drawn again with pencil or pen.


C
E
A
1
1
1
2
2
2
B
F
D
1
2
3

XIX

Method for Shading and Hatching

The proper method of shading, or hatching, is shown in the leg marked D, which is presented from the front in figure E, and from the side in figure F, where the main muscle lines are clearly indicated.

After sketching in pencil, clean the drawing using a piece of morocco leather, Spanish leather, or even the quill of a feather. This will prepare the surface for ink work.

Next, identify the light areas, the shadows, and the muscle placement.

You will need three kinds of pens:

- One very fine for the lightest hatching,
- A medium pen for the strokes nearest to the light,
- And a thicker one for the darker hatching or heavier lines.

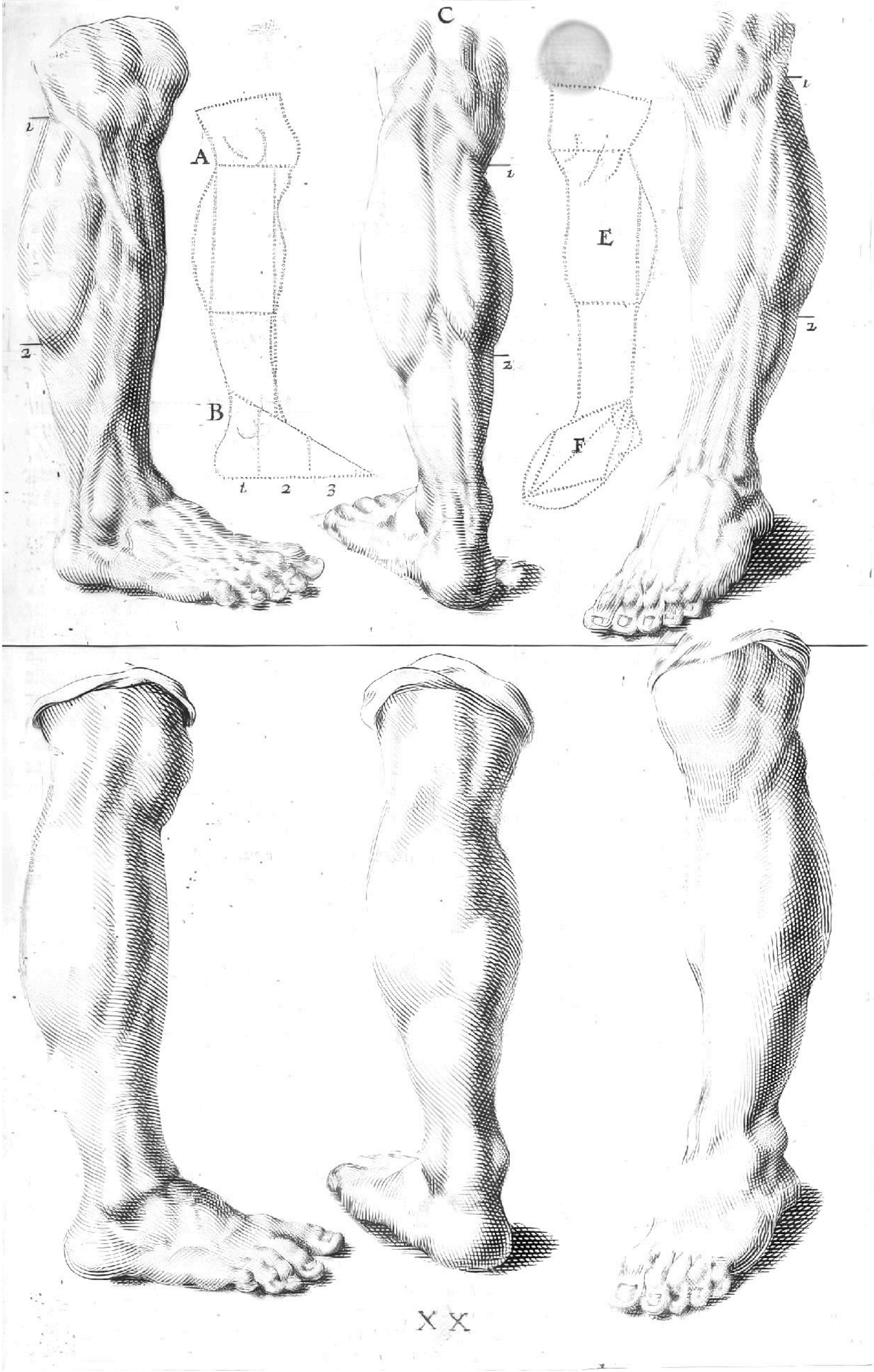
When hatching:

- Begin with a single-direction hatch, then layer further strokes to build tone.
- Always hold the pen firmly, and make the lines even in pressure and spacing.
- Where the shadows deepen, press more firmly to create a bolder mark.

It is essential to make the three layers of hatching one after the other, always allowing the ink to dry before going over it again.

Once the hatching is complete, if anything more remains to be observed, that will be learned best through practice and experience.

Now let us move on.


C
1
1
A
E
2
2
2
B
F
1
2
3
1

XX

Drawing the Feet of Women and Girls

To help you also learn how to draw the feet of women and girls, I will now present a very simple method, and show the differences compared to those of men.

I will present three examples:

- The first foot, A, is seen from the front, and is drawn as follows:
  - Draw two parallel lines down to the ankles.
  - Then, place a square, marked B, which is divided into three parts:
    1. The first part marks where the foot begins, between the two ankles.
    2. The second covers the top of the foot.
    3. The third defines the area for the toes.
  - From this, the foot is easily formed, as shown in figure C, which shows the foot turned from behind.

To construct this:

- Again, draw two parallel lines, then place a circle, marked D, above them.
- Add a triangle, which fits exactly at the ankle position—this creates the foreshortening.

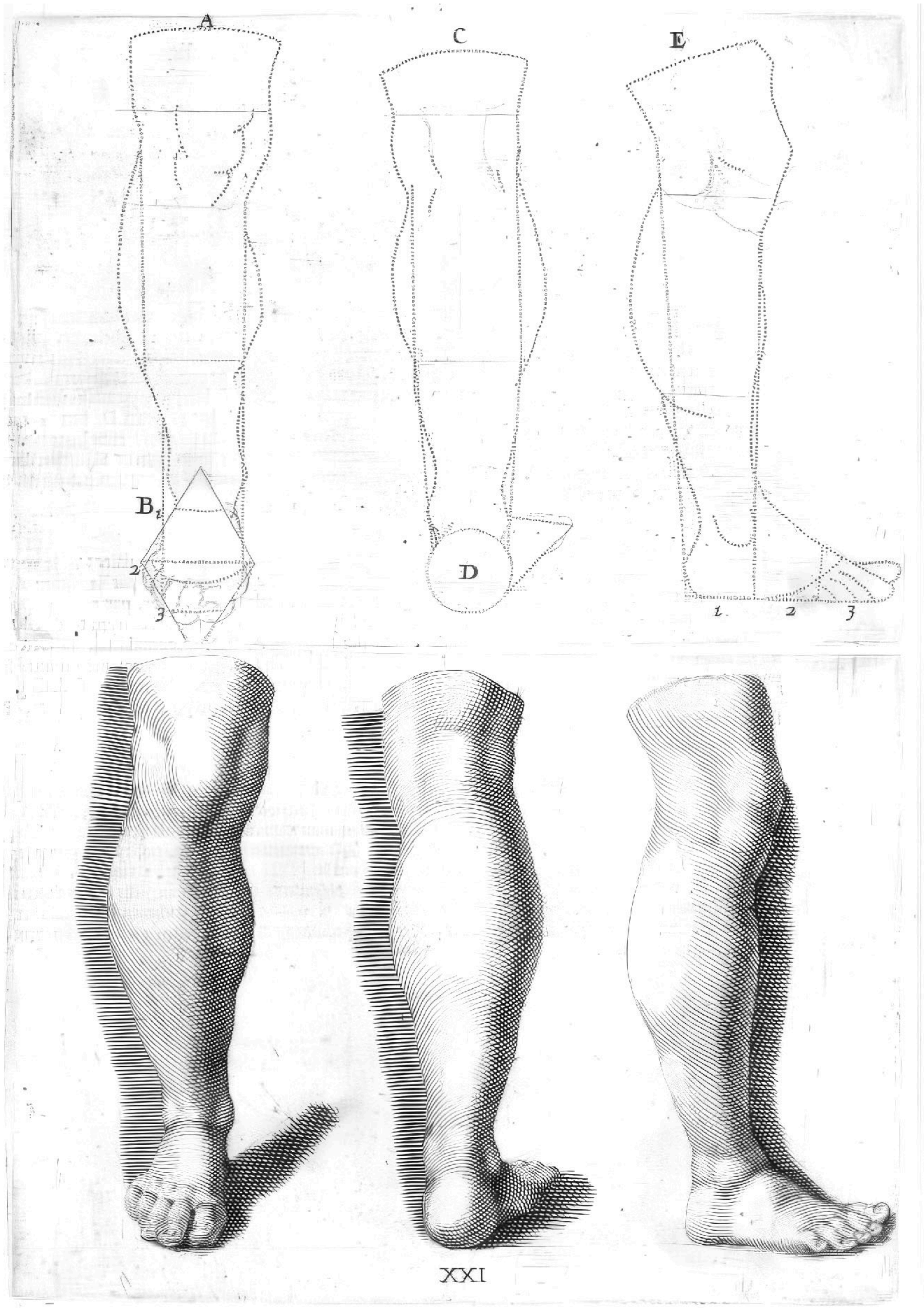
For the side view of the foot, begin in the same way:

- Draw two lines, and place them on a scalene triangle.
- Divide this triangle into three equal parts:
  1. One part for the heel,
  2. One for the top of the foot,
  3. One for the toes.

While the basic sketch or construction of women’s or girls’ feet follows the same method as for men, their lines should be softer and more rounded. I will explain this more fully in the second part of this work.

I have already discussed shading in detail in Problem XX, but here I must add a key point:

When drawing the legs or feet of women in ink, do not apply heavy or overlapping hatch marks. Instead, create the main effects of shadow and roundness using simple, single-direction hatching. This way, when the shading softens as it dries, it will only lend the gentlest shadows, adding refinement and finishing the form with delicacy and grace.



XXI

Drawing the Arm in Proportion and Structure

Since the arm is one of the most essential parts of the body—without which the human figure is incomplete—I now wish to provide a very simple rule for drawing it, as shown in figure A.

This figure represents the arm of a strong and robust man, and must be drawn accordingly.

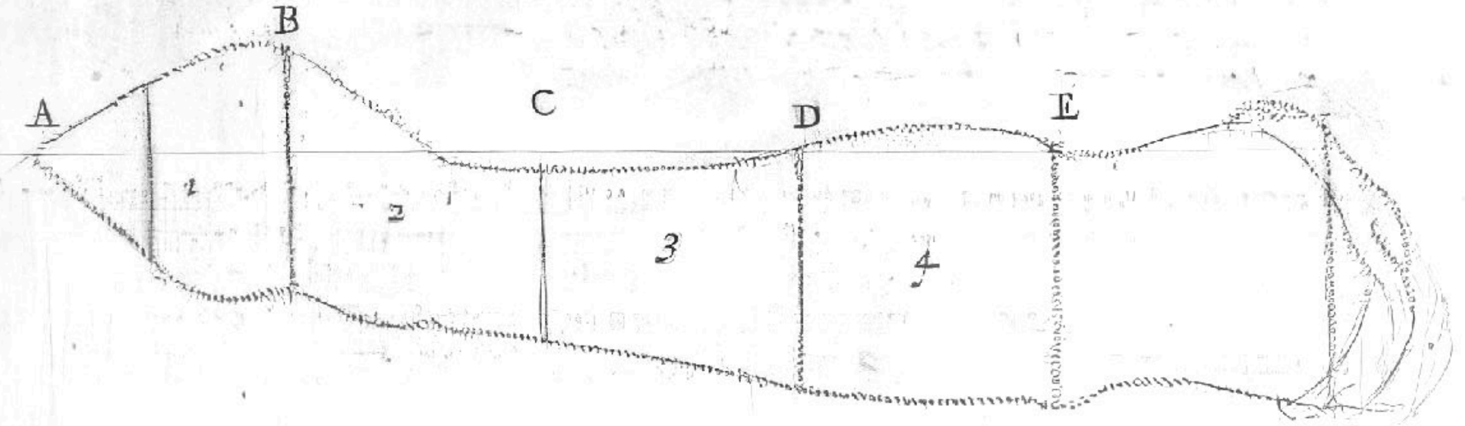
The arm is divided into four parts, based on its thickness and length, extending down to the tips of the fingers:

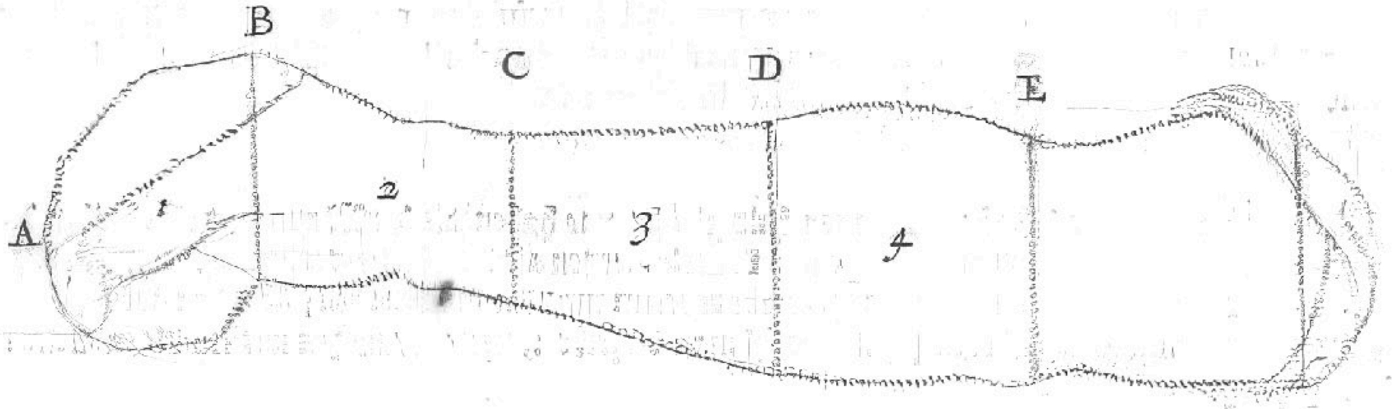
- The first section is marked by A–B
- The second by C
- The third extends to D
- And the fourth reaches down to E

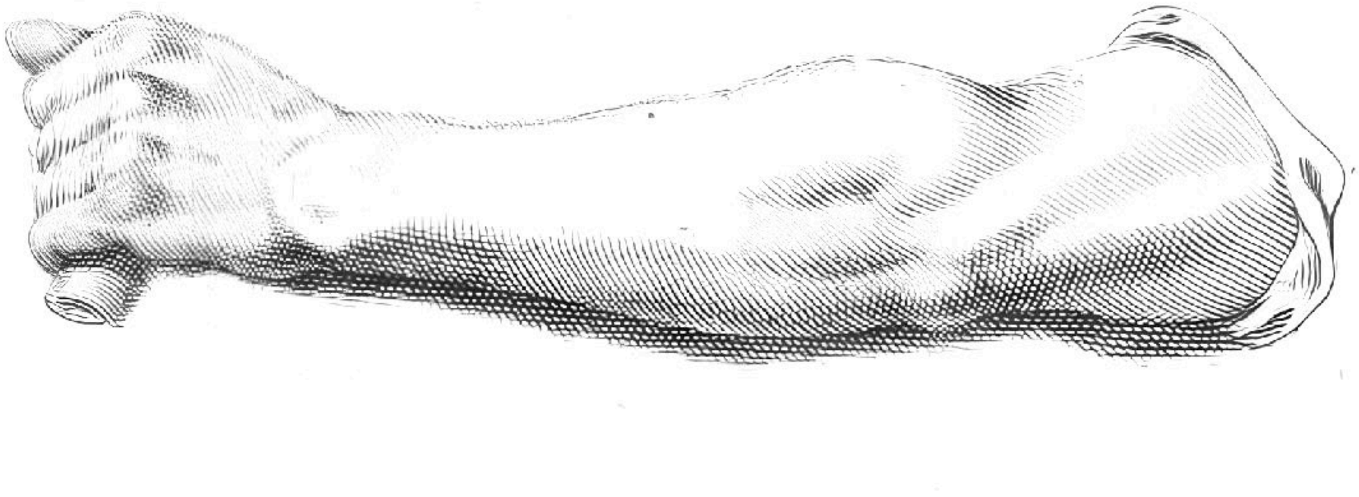
To better illustrate how the form changes, I also show another view of the arm from the inner side, following the same proportional divisions as the first figure.

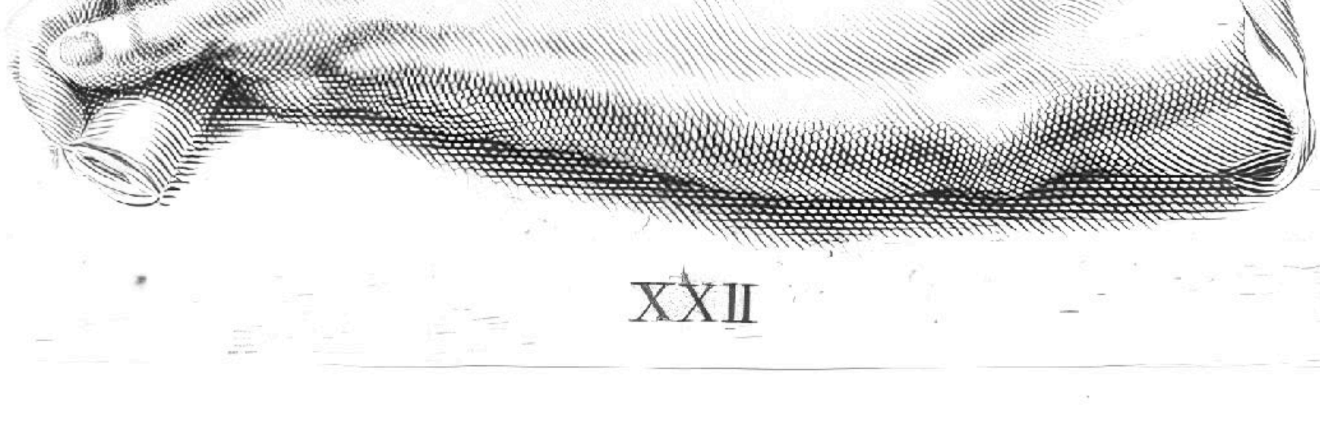
In this version, the muscles are indicated from the inside, using a very simple method.

When shading with hatching, or when working in ink, the same principles apply as I described earlier for the legs and feet:
Use clean lines, and guide your strokes with care and balance to express the form with clarity and proportion.









XXII

Drawing the Arms of Women and Girls

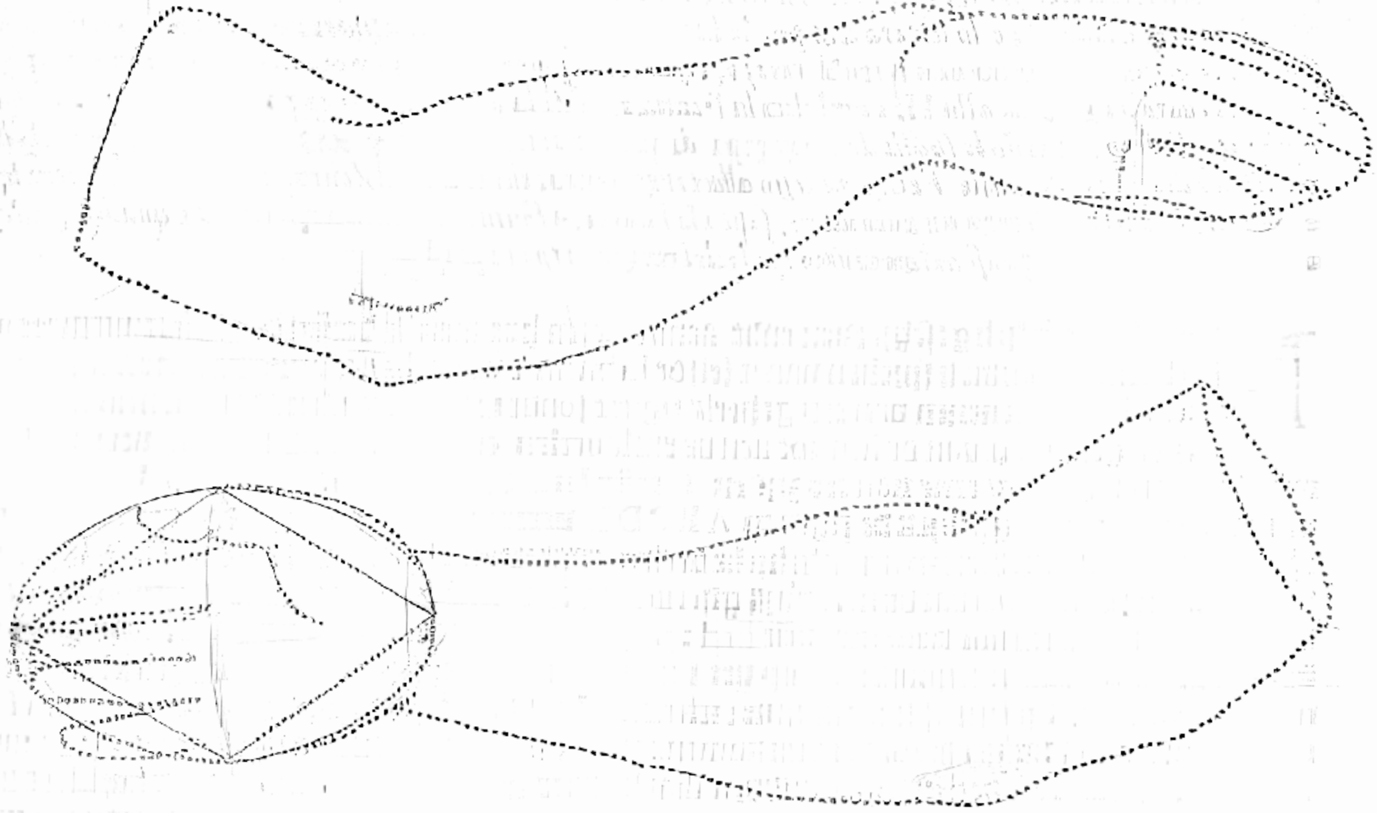
Because the arms of women and girls follow nearly the same proportions as those of men, their construction may be approached similarly.

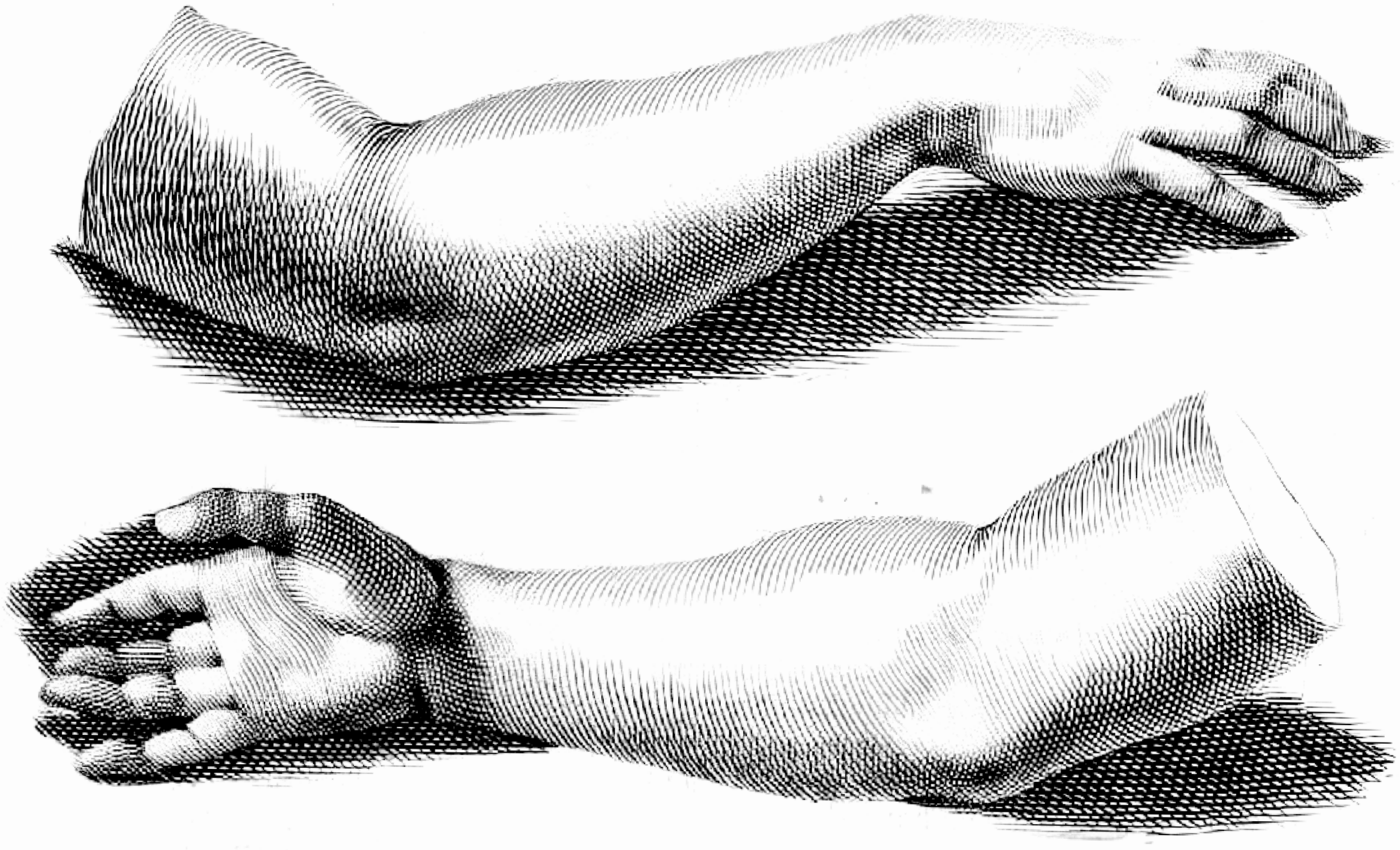
However, their lines are softer, less muscular, and more refined—since their forms are naturally more delicate and smooth.

I will treat this subject in more detail in the second part of this work. But for now, in terms of basic construction, you may apply the same principles.

As for shading, it should likewise follow the same method I explained in Problem XX:

- Use gentle, clean strokes,
- Avoid excessive crosshatching,
- And apply subtle tone to express softness and roundness rather than pronounced structure.





XXIII

Constructing the Human Torso in Proportion

After having explained how to draw the individual parts of the body, we now come to the body itself.

Because it may be too difficult for beginners to attempt drawing the entire figure at once, we find it more suitable to divide the body in two—specifically from the chin down to the lower pelvis.

We present this section of the body in various views:

- One from the front,
- One from the side,
- One from the back,
- And another, slightly turned to the rear.

This is done using the figure A–B–C–D–E, based on a given measurement, or modulus, which is divided into three equal parts:

- The portion marked B–C serves for the chest, down to the base of the heart.
- The section D represents the area from chest to the navel.
- The portion E defines the pelvic region.

To find the width of the torso, we take two of these same measures, which correspond to the width of the shoulders—though slightly less in the flanks, and as noted, broader again at the hips.

For the side view of the torso:

- Measure from E to G for the first section,
- From H to the navel for the second,
- And from there to I for the third.

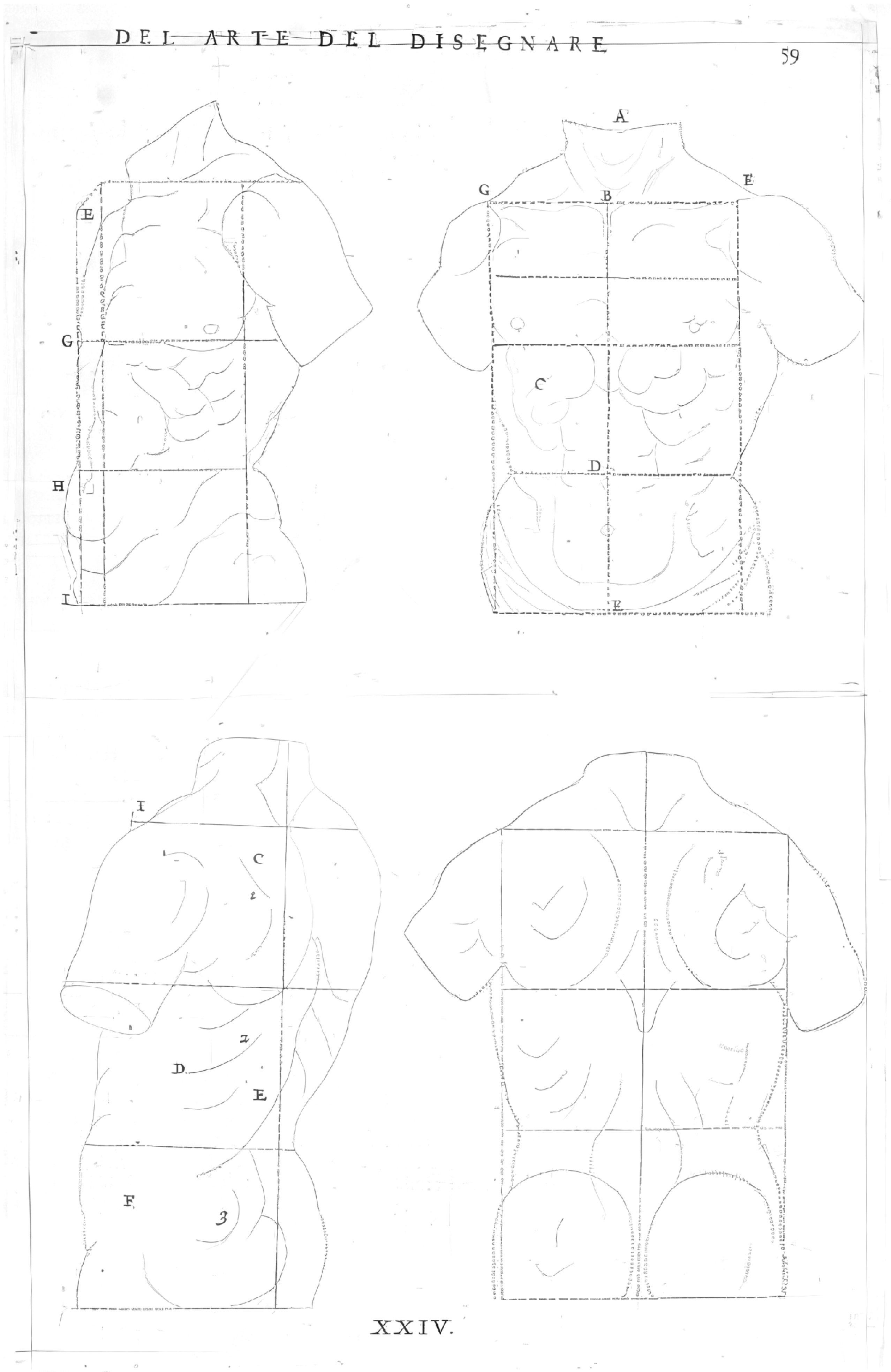
Between the shoulders, the width measures approximately one and a half units, narrowing slightly toward the centre.
Below the waist and over the belly, the measurement remains the same as above.

In the third figure, where the back is turned, use two squares:

- One between the shoulders,
- And one at the division of the buttocks.

The back, even when slightly turned, retains nearly the same width, as does the torso in profile view.

This concludes the topic set forth in Problem 24, intended to simplify the drawing of the torso for learners just beginning to take on the full figure.


DEL ARTE DEL DISEGNARE 59

XXIV.

Refining the Torso with Muscles and Gentle Rendering

After having carefully constructed the most notable surface features—namely the nipples and the navel—it is now necessary to begin drawing them properly, along with the principal muscles:

- The ribs,
- The lower belly,
- The shoulders,
- And the other muscles along the sides.

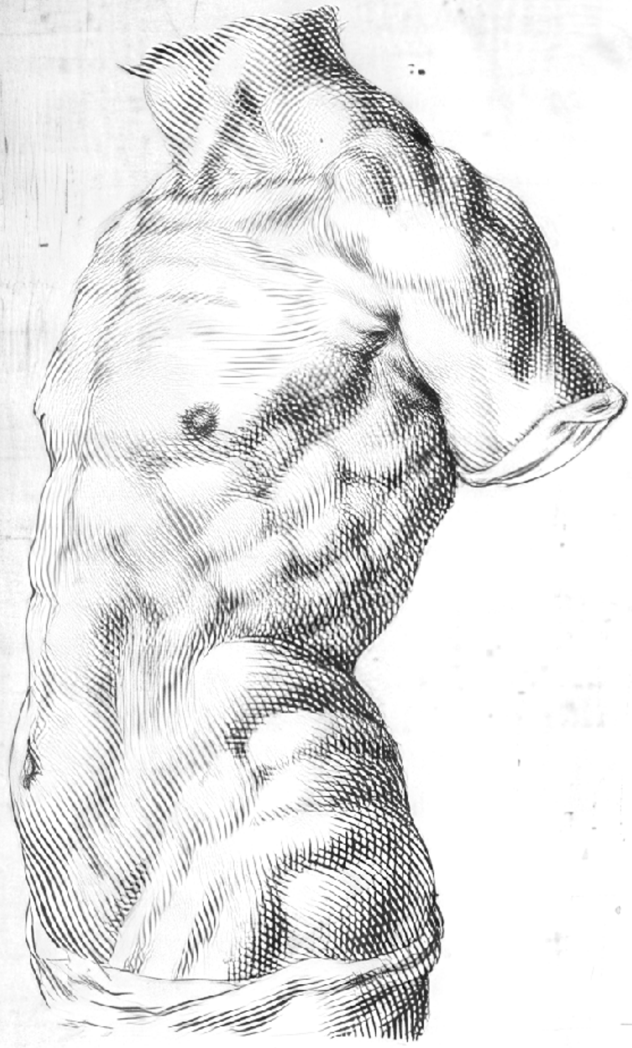
These should be sketched lightly, using charcoal or another soft medium, so that when you go to erase your guidelines, they do not stain the paper, nor cause the true line to be lost among the initial rough sketch.

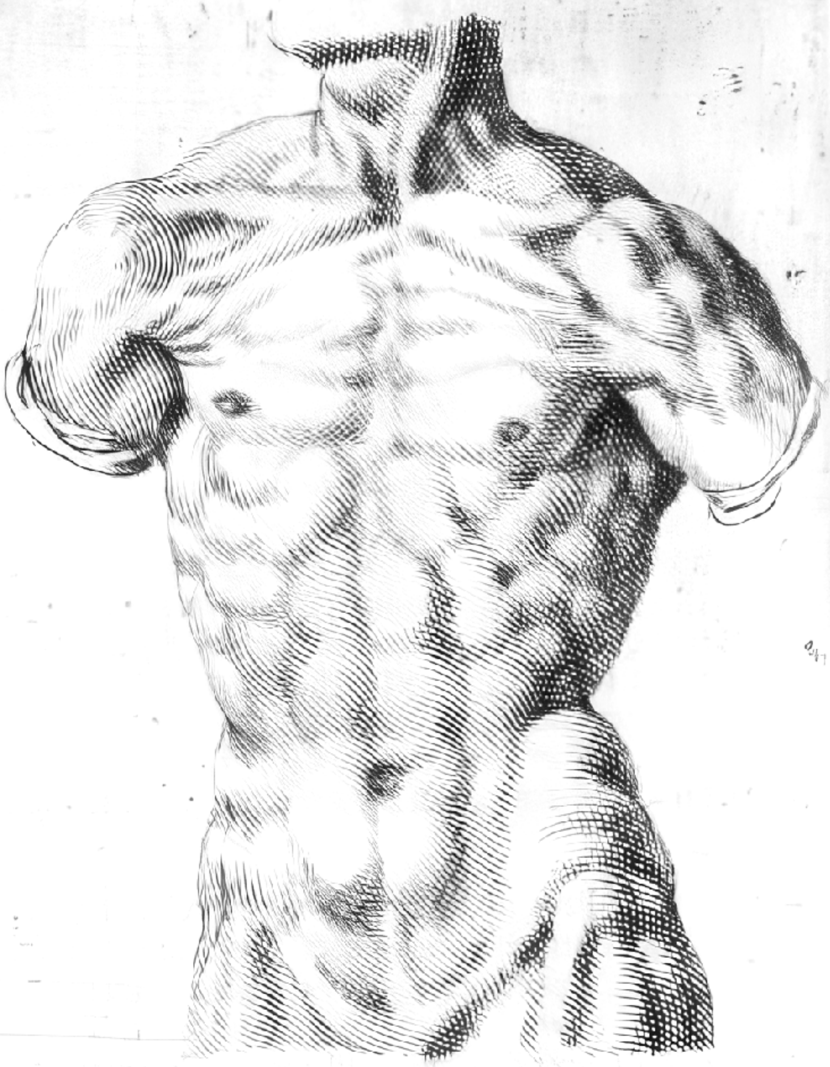
As soon as the important parts have been noted, take a soft cloth, or a fine feather—such as from a duck or another bird—and gently erase the loose strokes, little by little, so that only the defining line remains.

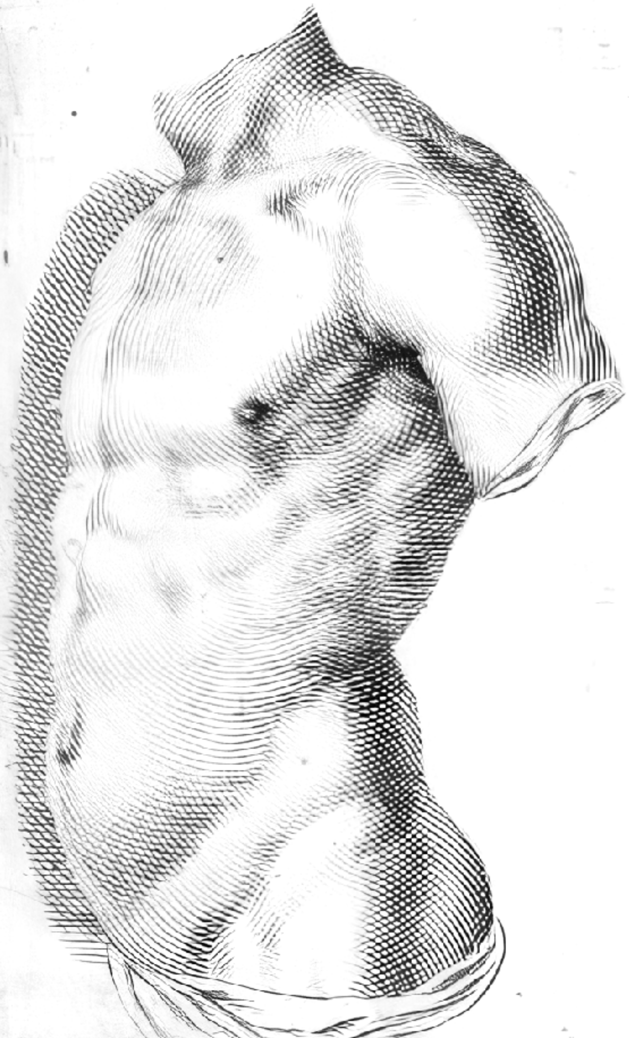
For the most important forms, complete and refine them cleanly with ink, just as I have shown in the problems on feet and arms.

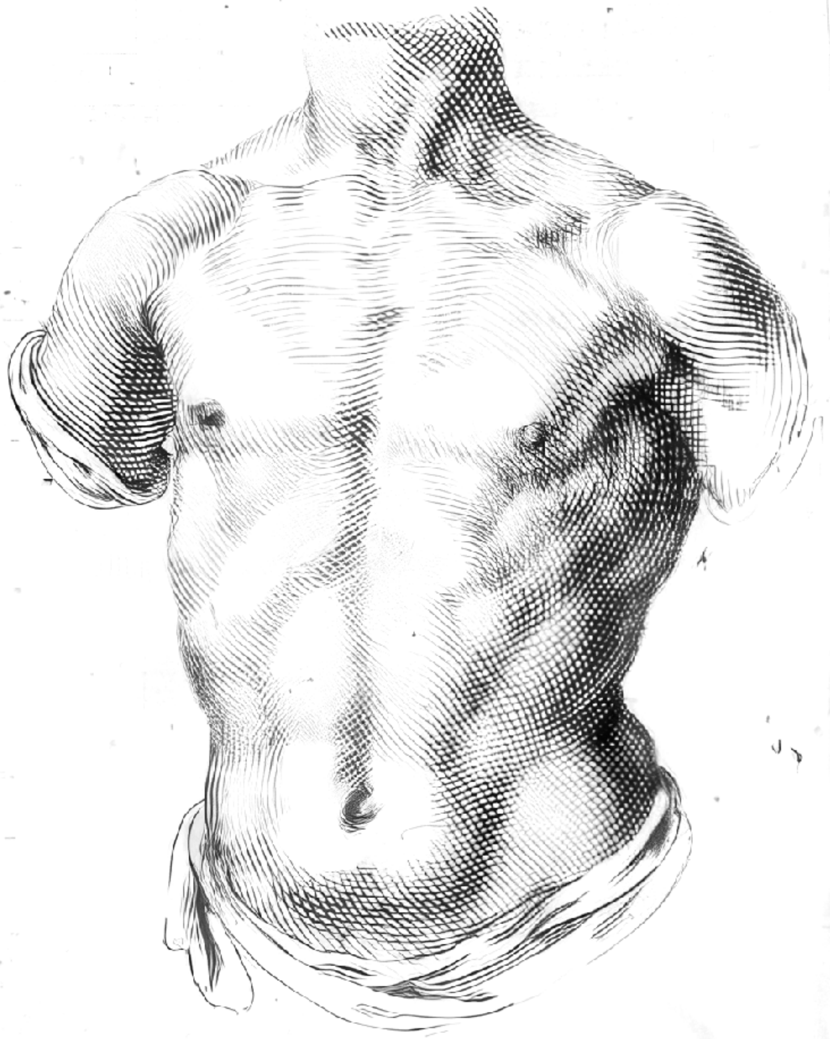
Above all, before applying a second layer of hatching, take care to observe the muscles and shadows in their proper places, so that when the second hatch is added, it can enhance the form effectively.

In strong light, be careful not to press too hard, and always handle the pen delicately—a subject I will explain more fully in the following sections.









XXV

Constructing the Male Torso from the Back

After having shown the initial method for drawing the male body from the front, I consider it no less necessary to teach how to draw it also from the back.

To make it more easily understood, I have represented it in two forms—as a surface form and as a flayed anatomical figure, marked A and B.
This is so that young students may begin to understand how the muscles connect and interact, so that later, when they draw complete figures, the process will not seem so difficult.

To assist in this, I have labeled the individual parts with letters:

- C marks the shoulders
- D, the ribs
- E, the spine
- F, the hips

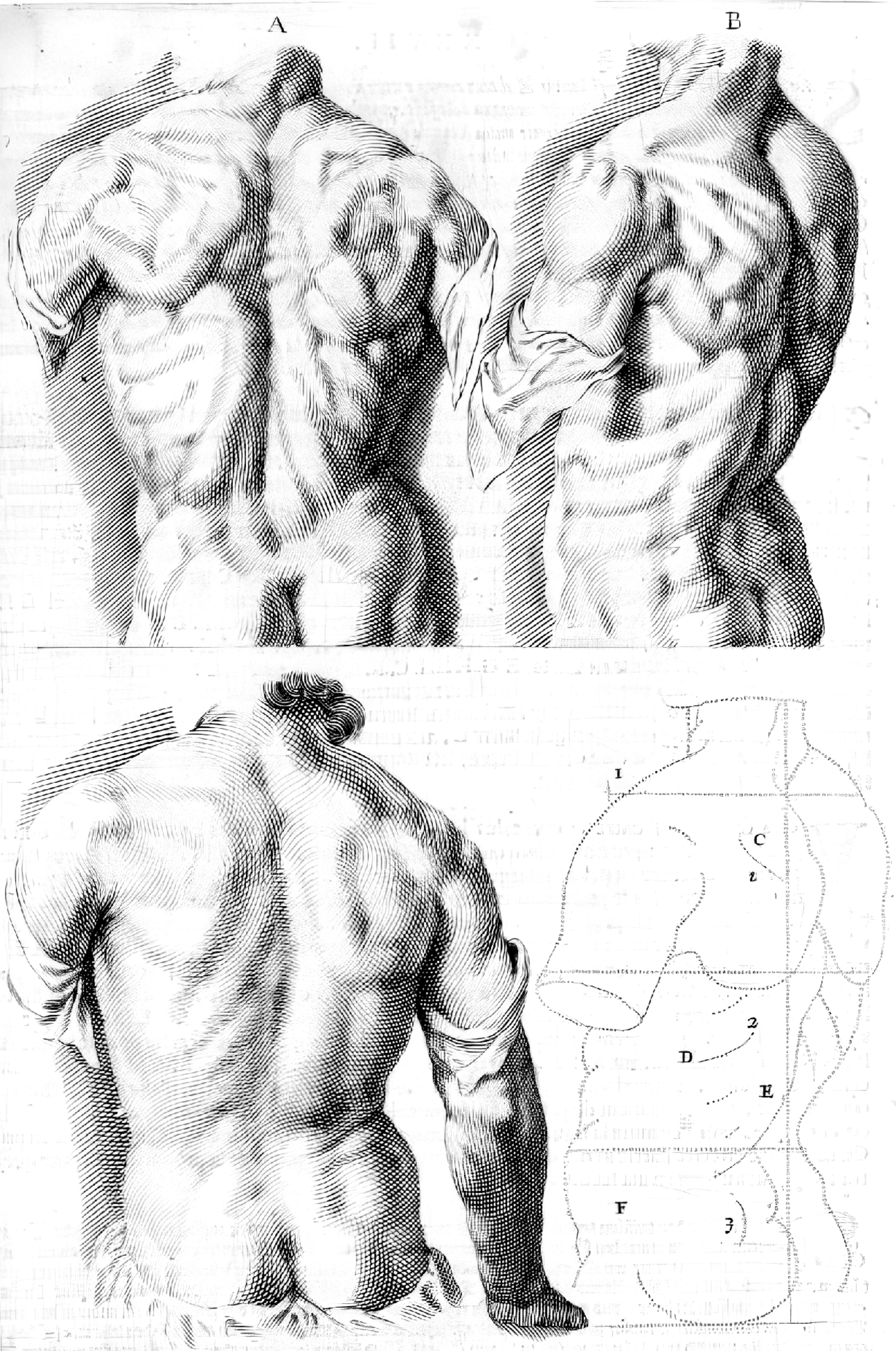
Once the body has been sketched, especially in its anatomical form, it becomes much easier to then draw the exterior surface.

As for the method of constructing the back, it follows the same principles as the front:

- Where you find the chest on the front, you will find the shoulders on the back;
- Where the belly is on the front, you will find the buttocks on the back;
- The trunk maintains the same structure, and every part has its corresponding element.

Letter G marks an arm, shown slightly bent inward.

This should suffice for the present, as I will discuss these matters more fully in the second part of this work.


A
B
I
C
2
2
D
E
F
3

XXVI

Differences in Male and Female Proportions

You should know that there is very little difference in proportion between the bodies of men, women, and girls, except that women have slightly narrower shoulders and wider hips at the sides of the abdomen.
I will speak more extensively on this subject in the second part of this work, in a manner that beginners may understand more easily, using the simplest and clearest method.

To this end, I propose the analogy of a tailor:
When undertaking to cut a piece of cloth, the tailor measures and divides to prepare separate pieces for:

- The front of a doublet,
- The back,
- The sleeves,
- The cape,
- And finally the entire garment.

In the same spirit, I take the human body and divide it into three equal parts:

- From A to B,
- From B to C,
- And from C to D.

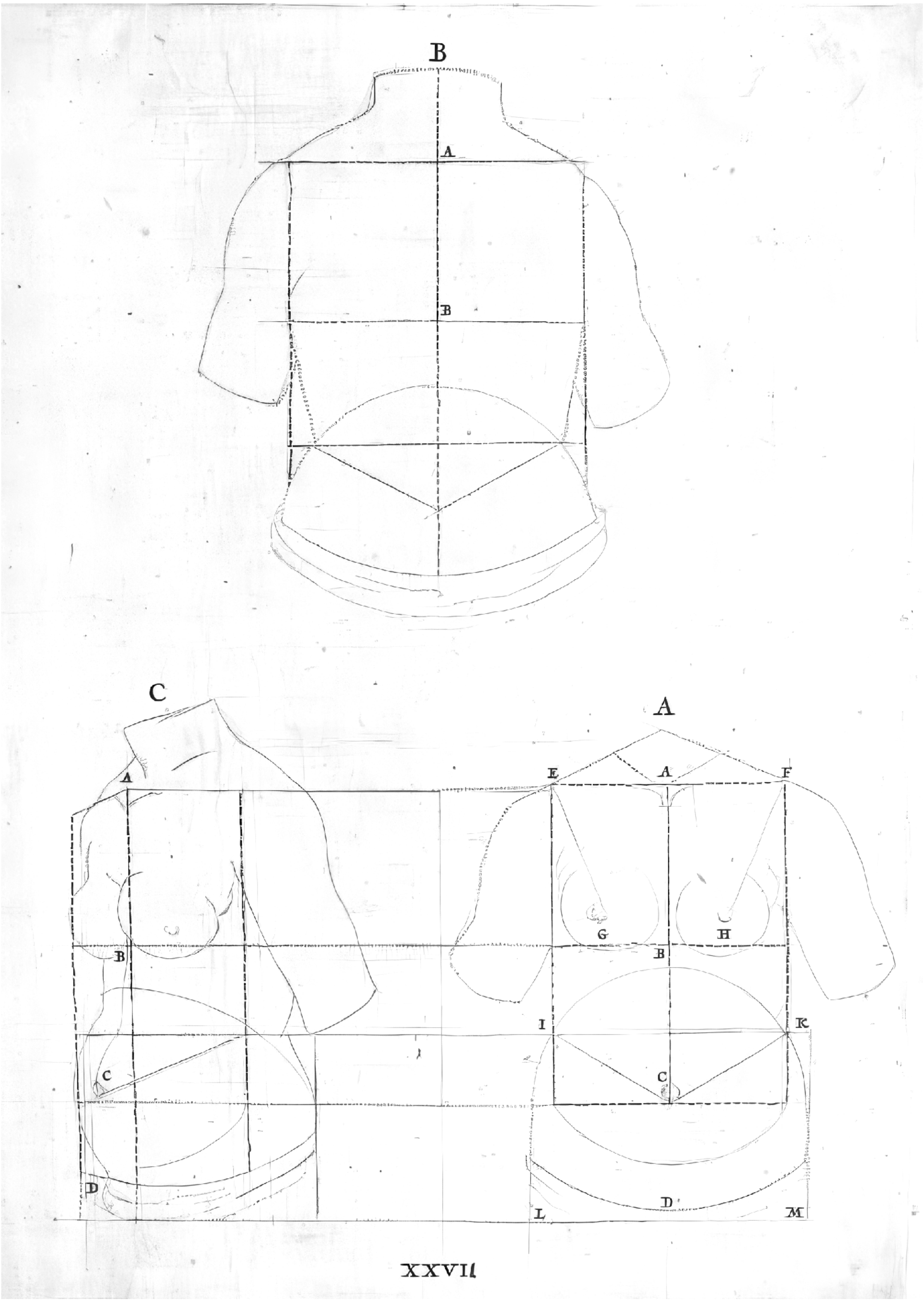
To make this even simpler, construct a basic trunk shape, and follow the guidelines indicated by the letters E, F, G, and H.
Beneath that, draw another slightly smaller section, and then another larger shape at K, which represents the belly.

The lines I, C, and K are of the same measurement, allowing you to find the width more easily.

- L and M mark the beginning of the hips.
- Once you have committed this structure firmly to memory, it will suffice.
- The golden compass—or rather, the judgement of the eye—must do the rest when it comes to refining the proportions.

As for the back of the figure, it is drawn in the same manner, as shown by figure B, and similarly, the body in profile appears in figure C.

This, I believe, completes what I wished to say here to young students about the basic elements of human proportion.
I shall discuss all these things at greater length in the second part.



On the Proportion and Treatment of the Female Body

Ultimately, there is very little difference between the bodies of men and women, and especially that of girls aged 16 to 17, in terms of musculature—particularly when the breasts have not yet fully developed.

Likewise, there is little variation in the general form between boys and girls, which I will discuss more fully in the second part of this work.

Let us go a step further.

The female body differs primarily in that the forms are softer, and so one must:

- Add the breasts,
- Make the hips slightly wider,
- And give the abdomen a rounder elevation.

In all other respects, the figure is drawn similarly to that of a man.

Finishing with Charcoal and Pen

Before all else, sketch the figure in charcoal, and then draw it cleanly in ink.

Before you begin hatching with the pen, take a clean cloth, or the wing of a duck, and gently erase the charcoal lines—so they don't interfere with the ink work.

Most importantly:

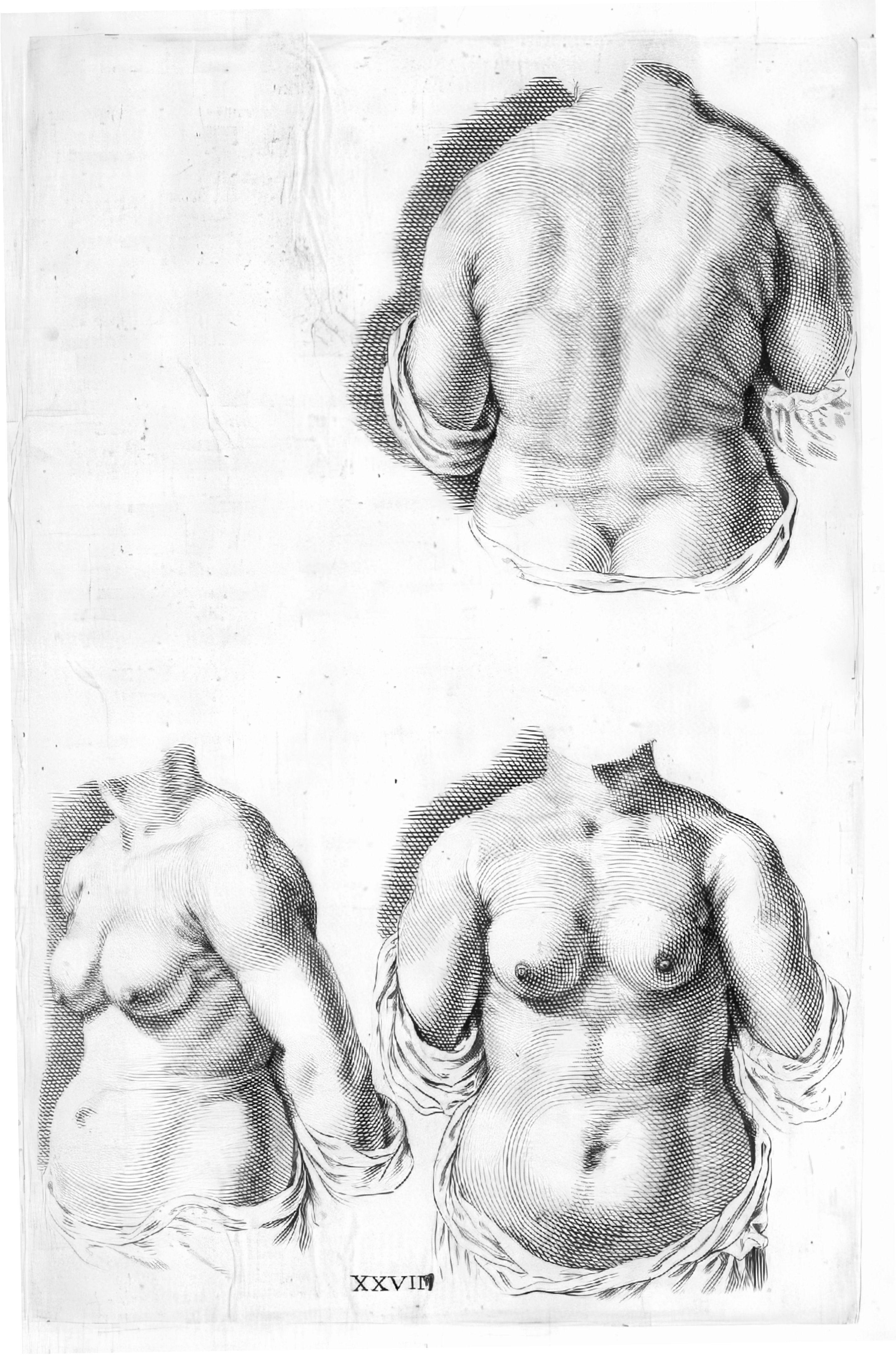
- Before hatching, mark clearly the areas of light and shadow.
- In shading, apply heavier strokes where the shadow is darkest.
- Use a broader, more bluntly cut pen to make these first strokes bold and confident.

Once the ink has dried, you may add a second layer of hatching:

- Press a little more firmly where the shadow demands depth.
- Always keep a finer pen for the lighter areas, where you work closer to the light.

Though your hatching should be delicate, it must still be effective—and, above all, it should fade gently as it approaches the light.

I believe I have now said enough on hatching and shading with the pen. The rest will come through practice.



Problem on the Proportion of Children, Both Male and Female

Because children have not yet reached the perfection of their form, and because their small limbs, not yet fully developed, often appear to be folded into one another, it is necessary to find a suitable method for drawing them. Here is how it may be done:

- First, draw a line from the top of the head to the sole of the foot.
- This line is divided into five equal parts:
    - From the top of the head to the genitals: three parts.
    - From the genitals to the feet: two parts.

This can be seen in the figure A.

- B is the first division,
- C the second,
- D the third,
- E the fourth,
- F the fifth — together establishing the child's full height.

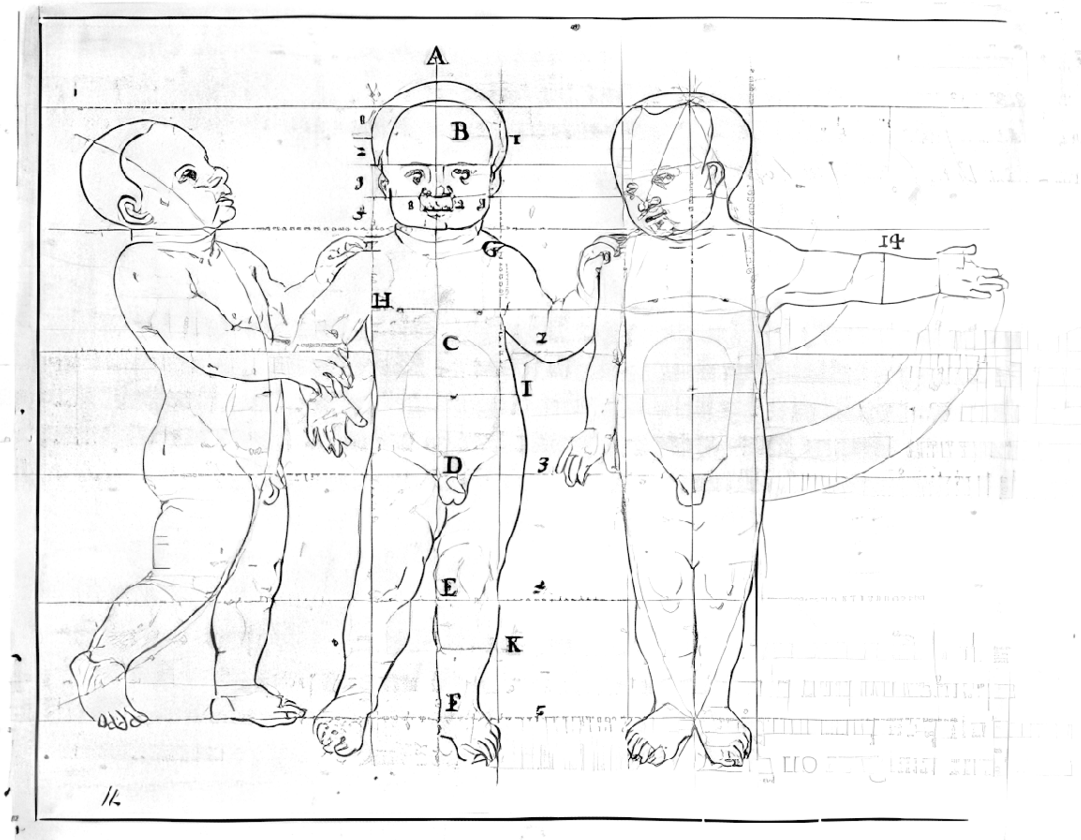
Now let us consider the widths:

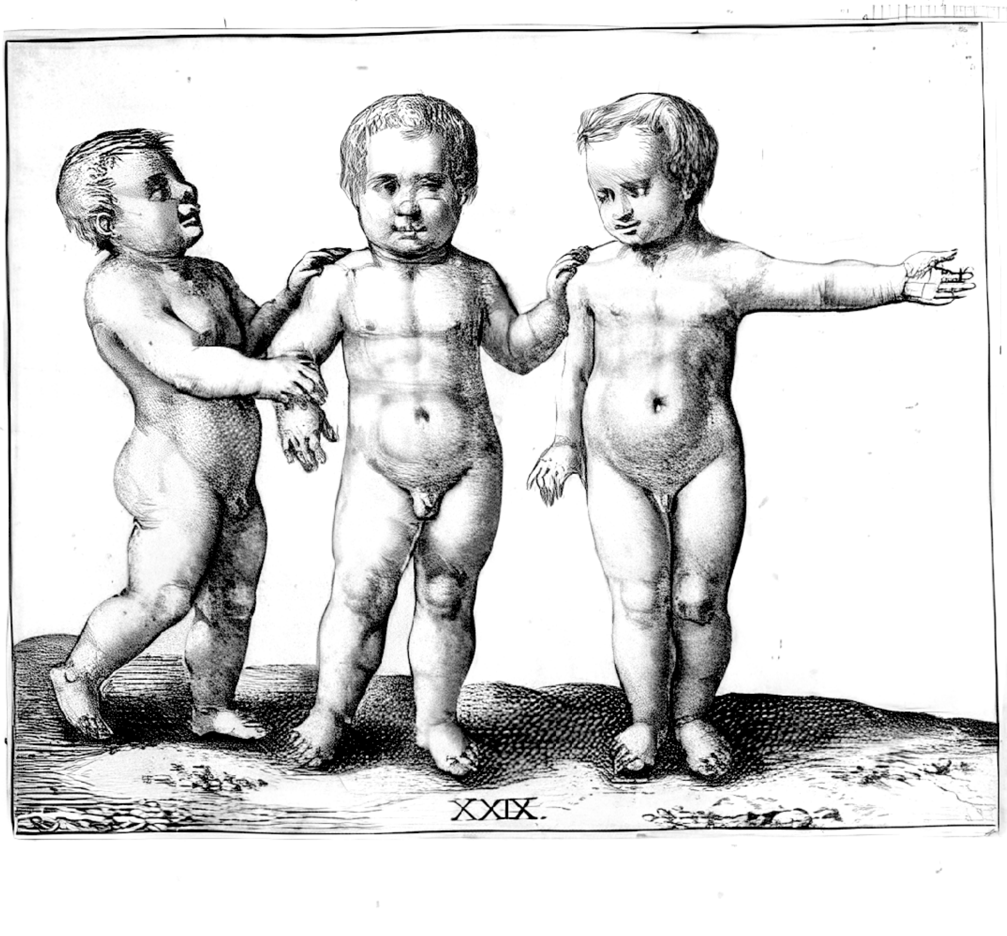
- The face is four times the height of the nose, and three times its width, including the ears.
- Just below this, the shoulders span the width of one head, marked G.
- A little lower, at the armpits (marked H), the width matches the distance between the two ears.
- At the hips (marked I), the width again equals one head.
- Lower down, at the thighs, the width is half a head, measured from the tip of the chin to the eyebrows, as shown by line K.

- At the lower leg, the width corresponds to one-sixth of the total height, or the distance from the chin to the nose.

As for the limbs:

- The outstretched hand is twice the length of the face, from chin to crown.
- The arm, in its width, measures one-fourteenth of the total height, or the distance from chin to the tip of the nose.



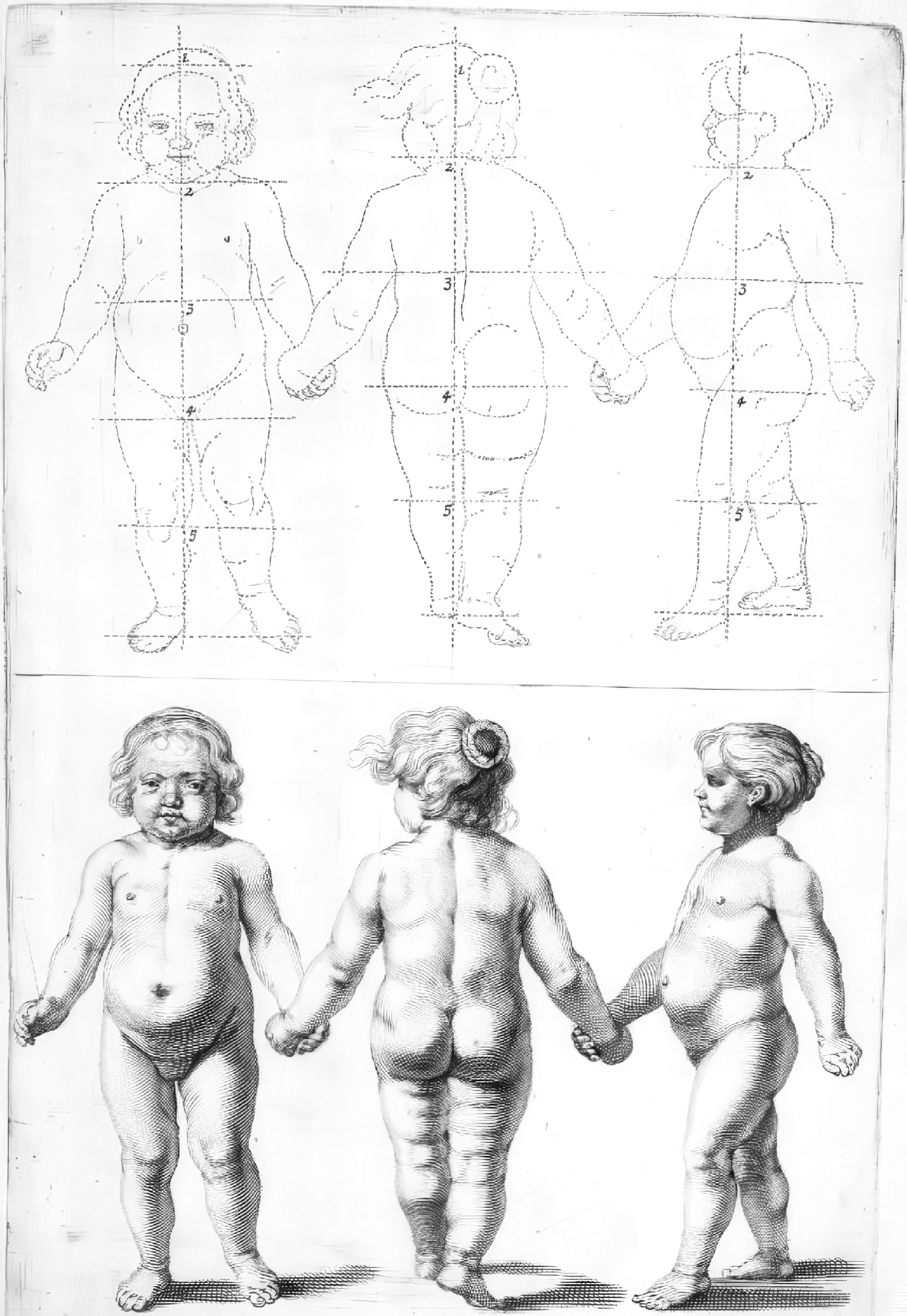

XXIX.

On the Difference Between Young Male and Female Children

There is little difference between male and female children between the ages of two and three, except that:

- Girls tend to have slightly narrower shoulders,
- A somewhat larger and more pronounced belly,
- Hips and flanks that are a little broader, and
- Softer limbs, as well as
- A smoother back.

These distinctions vary according to whether the child is lean or plump. This is the extent of the difference I have been able to observe.


1
2
3
4
5
1
2
3
4
5
1
2
3
4
5

XXX

Part Two

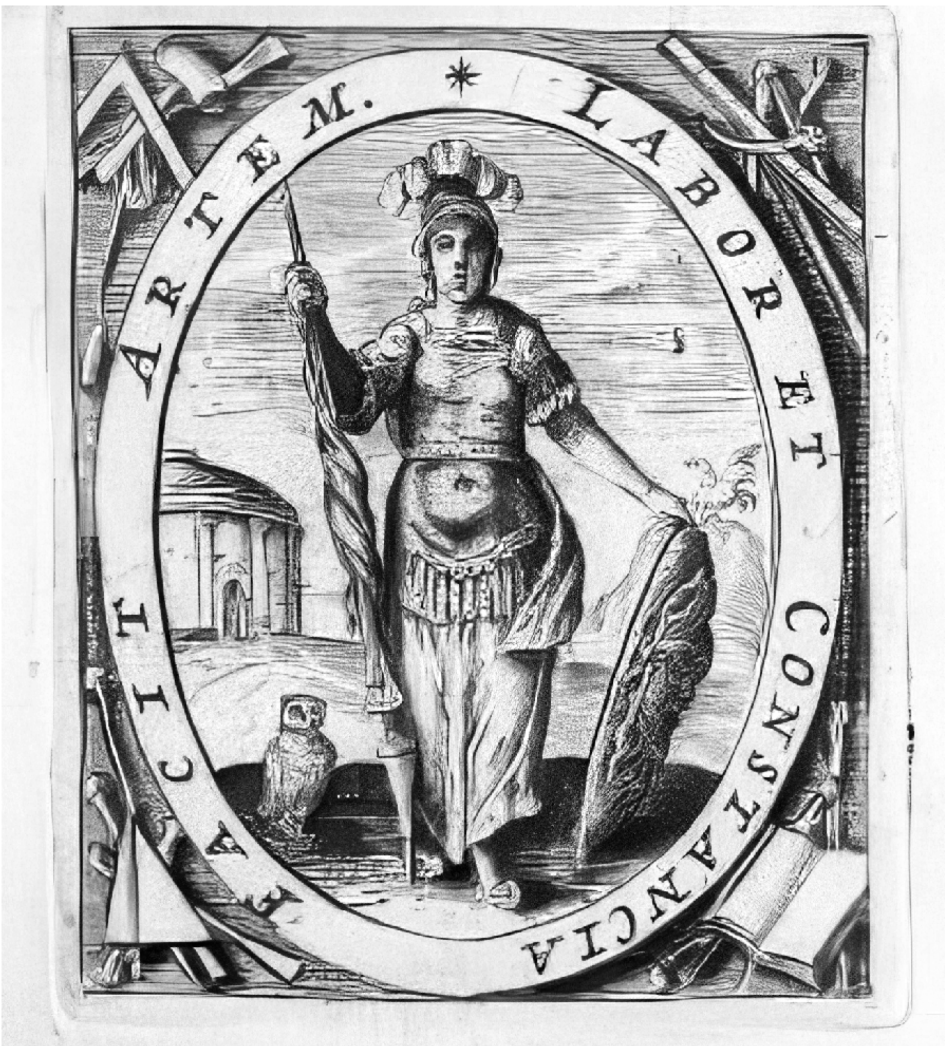
On the Light of the Art of Drawing and Painting

In which are contained all the proportions,
of man, woman, and young girls,
according to the order of the Five Columns.

Also included:

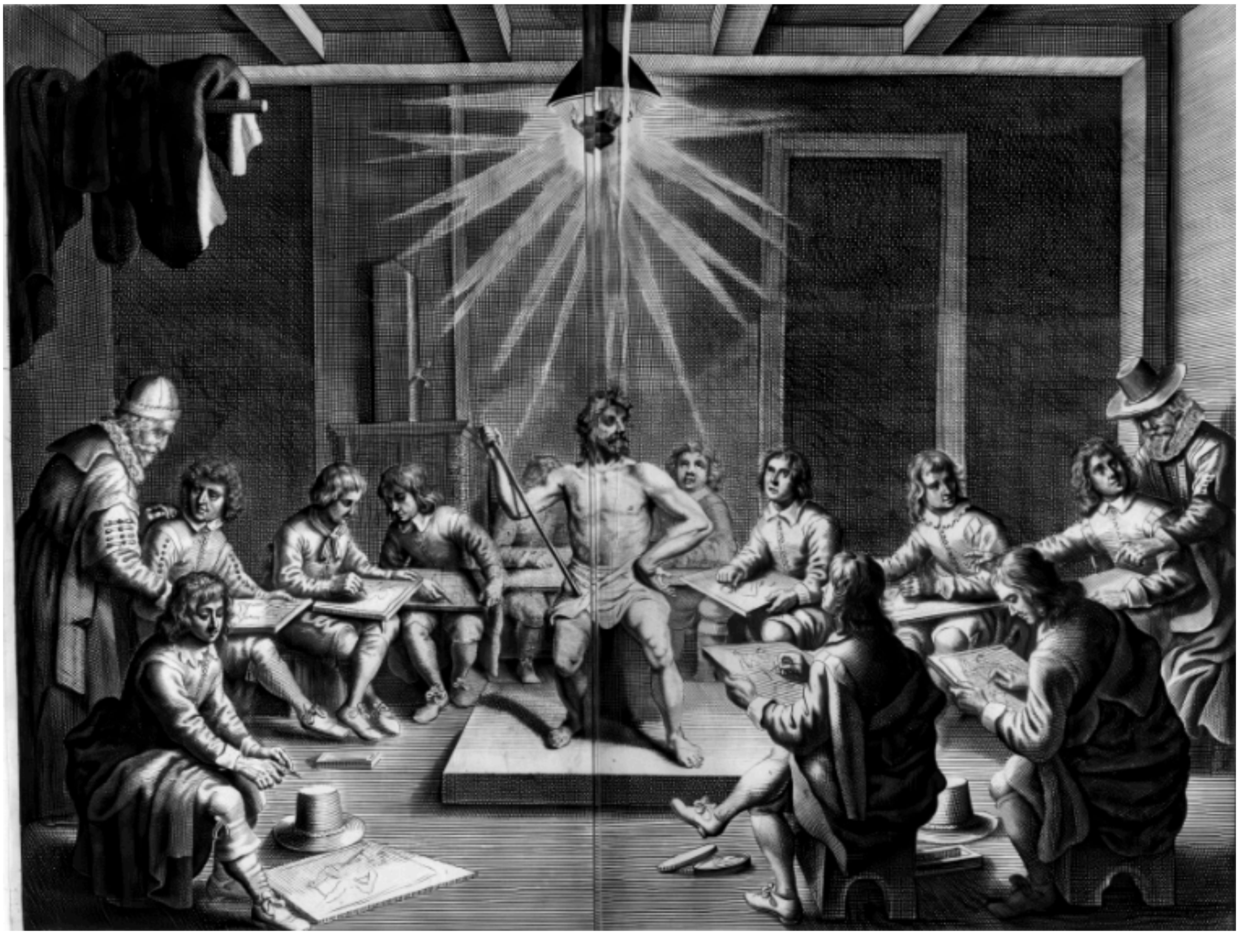
- The use and customs of the Academy of Painters in Rome,
- Or otherwise, the method of the School of Drawing,
- And how one ought to dress the model
  in all sorts of poses,
  with grace and dignity.

"Labour and perseverance create art”


LABOR ET CONSTANCIA FACIT ARTEM.

Representation of the Drawing School

In which is presented the true usage of the *Academy of Painters* in Rome, and it is explained and taught how to properly set up the model with good grace, how to correctly position the lamp's light, the reasoning behind casting shadows, and how to depict all kinds of figures on paper.



To Young Amateurs:

Even though the art of painting and drawing once held great esteem and perfection among the Greeks and Romans, it was nearly destroyed and driven from the world by the devastation of time and barbarian peoples. Yet just as the Latin language was restored to brilliance by the learned Erasmus of Rotterdam, so too painting began to revive in Florence around the year 1212, thanks to the noble youth Cimabue. Through diligent practice and the instruction of a Greek painter, he began to lift the dense clouds that had dimmed this radiant art, allowing the sun to shine once again.

The draftsmen and painters of old paid little heed to measurement and proportion, relying only on simple outlines to follow nature—as we see in the work of Martin, Israhel van Meckenem, and others. It was not until the arrival of such famous masters as Michelangelo, Raphael, Albrecht Dürer, Hans Baldung (Aldegrever), and Sebald Beham that proper proportions were rediscovered. In particular, the Italians—being both inventive and diligent—established the practice of using a life model under lamplight, so that students might better understand the power of shadows. Thus, in the long winter evenings, time would not be wasted but used to study nature and draw with confidence.

It is nearly impossible to establish a true academy or school of drawing without first hand knowledge of how to properly pose a model, to give the figure a graceful bearing, and to ensure the model is illuminated by light from an appropriate height. Since no one had yet written in detail on this matter—except Charles de Mander and Paul Lomazzo—I have resolved to offer here a brief description, based on my own experience and that of skilled masters.

Regarding the lamp, you may see its design in my first folio. The lamp should not hang higher than twelve feet, so that those who draw may have suitable light on their paper. One must take care that the room is neither too large nor too tall, so that it may be kept warm in winter with a stove or brazier. At the same time, the number of students must be considered so that they are not crowded and may bear the heat and smoke comfortably.

Once this is prepared, the model should be a well-formed man—neither too fat nor too thin, not distended in the belly, but well-shaped in thighs and legs. It is also important to decide the pose beforehand, so the model is not left to stand exposed for too long, and the students do not waste time.

I have noticed that many good masters, though they might intuitively sense whether a pose was graceful, could not explain why. But after studying the writings of renowned authors and drawing with those who had worked in the Roman academies founded by Michelangelo, Raphael, and others, I learned to articulate clear rules for posing a model with art and understanding.

If one wishes to pose a standing figure—whether resting on the left or right leg—care must be taken that the supporting foot falls directly under the head. The other foot may rest on its toes, or extend backward or outward. The side of the body supported by the leg should also shift slightly outward, particularly the hip—just as a tree bends or a crossbow curves. This must be balanced, like the movement of four-legged animals: legs and arms must not move together. If the right leg is thrown back, then the left arm must come forward, and vice versa.

It would be poor taste if the head and gaze followed the same direction as the body’s turn. Rather, the head should face the foot that bears the body's weight. Similarly, the arm on the advancing side should not also be moving forward. The model’s feet should not be too far apart—moderation is key, especially when the figure is bearing a load.

Above all, ensure the foot that supports the weight is on the same side as the shoulder or arm carrying the burden. Both legs should not move at once, unless portraying an action such as pulling a rope or lifting something with force. In all cases, one foot should always be beneath the head, as with wrestlers or workers.

For seated figures, when one leg is extended, the other should be drawn back. The knees should not be parallel. If the model holds an object, it should be in the hand on the side where the leg bends back. Avoid awkward or distorted poses where the limbs appear broken or twisted, or where the face and buttocks are visible from the same viewpoint—an effect once attempted by famous masters to show their cleverness, but which nature and modern taste reject.

For reclining figures, apply the same logic: if one leg extends, the other should bend. The same applies to the arms. When the right arm is extended, the left leg should draw back, and vice versa. If both legs are extended, they should not overlap but lie in balanced opposition.

Lastly, in standing poses, the head should not twist unnaturally past the central line. Arms should not rise above shoulder height unless the figure is making an effort. This should be sufficient for our purposes, as these principles are addressed to students. We shall speak more of refinements elsewhere.

On the Proportions of Man According to the Columns

Since columns bear certain similarities in proportion to the human figure—and since man derives the origin of his proportions from them—it will not be out of place to say something about this.

First, I take my rustic man as being seven heads in height. Such men generally have robust and coarse limbs, being particularly suited to bearing burdens and weights.

Next, I divide one of those seven parts into four, and call one of these parts a module. This module will serve later as a standard for measuring the smaller parts of the body.

Then I draw a vertical line from the top of the head (point A) to the sole of the foot (point H). This line is divided equally into seven parts, as follows:

- A to B: the head
- B to C: the interval from the head to the heart
- C to D: the distance from the heart to about two fingers below the navel
- D to E: from that point to a finger and a half below the genitals
- E to F: from there to the middle of the knee
- F to G: from the knee to the end of the calf
- G to H: from the calf to the sole of the foot

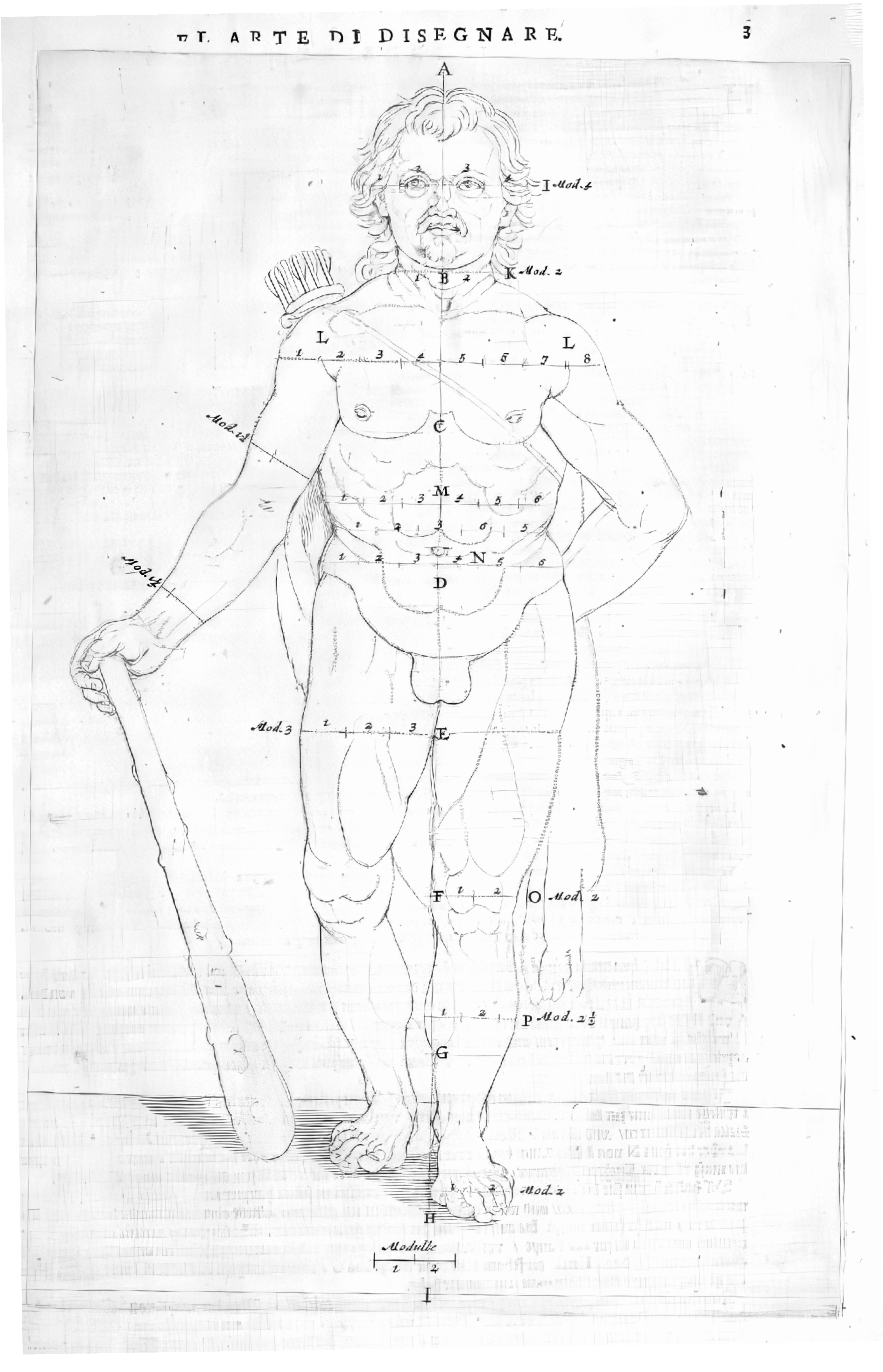
This completes the vertical or height measurements.

Now let us speak of width:

- The head (I) tends towards a square form, occupying 4 modules
- The neck (K) is 2 modules
- Then comes the shoulders (L), which span the width of two heads
- Measuring across the flanks or hips (M), the body is 6 modules wide, or roughly two face-widths
- Descending a bit further (N), the width remains about the same
- At the knees (O), the width is 2 modules

- The calves (P) measure about 2½ modules
- Finally, the toes span 2 modules

Thus, we have sufficiently described the proportions of a man whose height is seven times the length of his head.


IL ARTE DI DISEGNARE.
3
A
I Mod. 4
K Mod. 2
B
L
L
1 2 3 4 5 6 7 8
Mod. 12
C
M
N
D
Mod. 4
Mod. 3
E
F
O Mod. 2
P Mod. 2½
G
Mod. 2
H
Modulle
1 2
I

On Representing the Man of Seven Heads in Back and Side Views

Having already described my man of seven heads in height from the front, it is now necessary to represent him from behind.

We proceed in the same way, drawing a vertical line from the top of the head (point A) down to the sole of the foot (point H). I divide this line into seven equal parts:

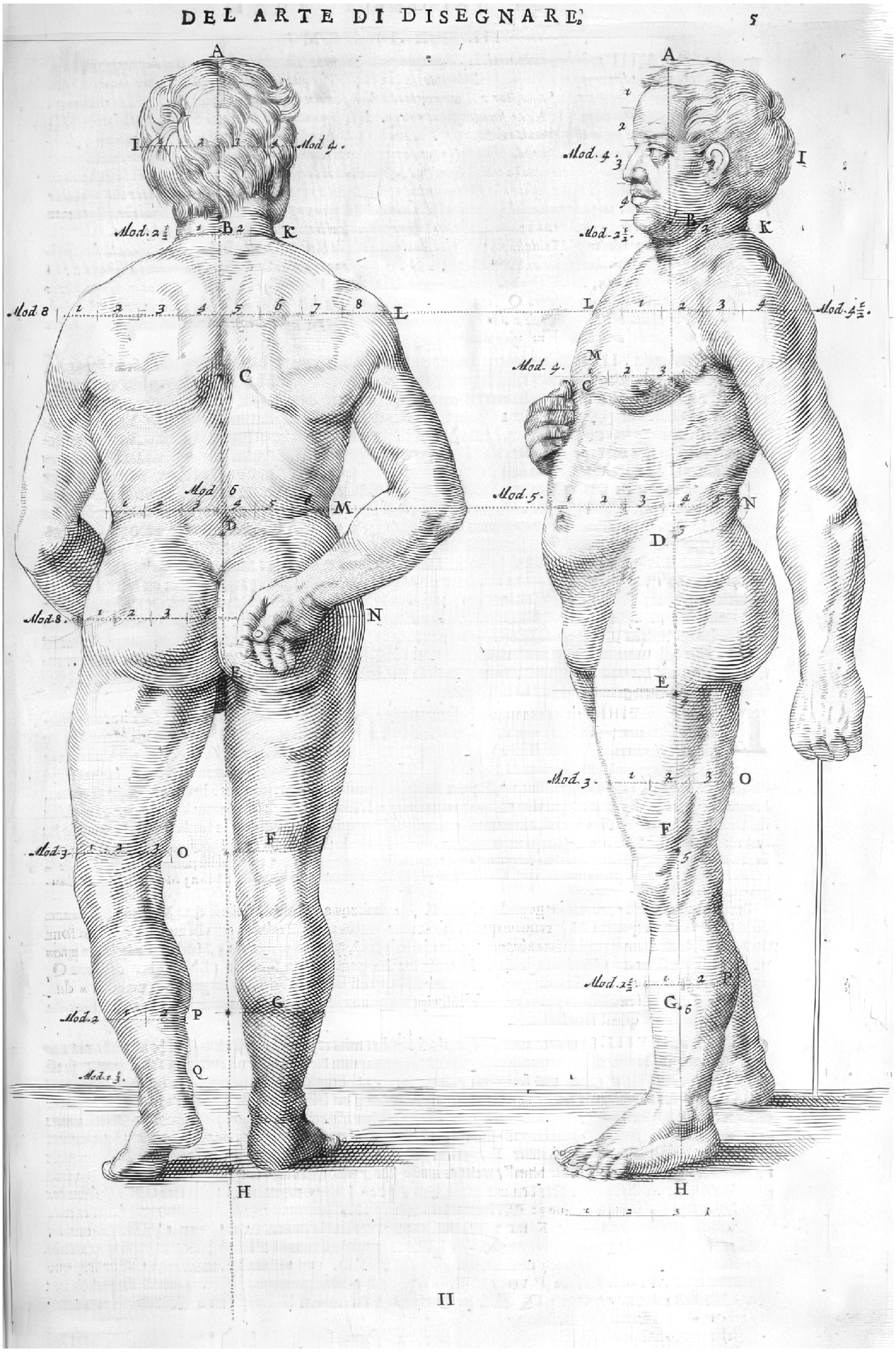
- A to B is the head (or one module)
- B to C reaches the small of the back
- C to D is the division or cleft of the buttocks
- D to E marks the end or bottom of the gluteal fold
- E to F lies just beneath the thigh
- F to G falls on the calf of the leg
- G to H reaches the sole of the foot

This completes the height in back view.

As for width, we will not spend too much time describing it in detail, but rather observe the main divisions:

- The width of the head is divided into 4 modules, marked at L. We use this as our unit for the smaller measurements that follow.
- At K, the neck measures 2 modules
- At L, the shoulders measure 8 modules or 2 heads
- At M, the flanks are 6 modules
- At N, the hips are again 8 modules
- At the knees (O), the width is 3 modules
- At the calves (P), 2½ modules
- Just above the ankles (Q), 1 module

- And at the heels (T), we find 2 modules


DEL ARTE DI DISEGNARE
5
A
I
Mod. 4.
Mod. 2½
B
K
Mod 8
L
C
Mod 6
D
M
Mod. 8.
N
E
Mod. 3.
O
F
Mod. 2
P
G
Mod. 1⅓.
Q
H
Mod. 4.
Mod. 2½.
Mod. 4½.
Mod. 4.
Mod. 5.
Mod. 3.
Mod. 2½.
II

Now let us turn our man of seven heads to profile view, as this is sufficient for the apprentice to understand the form from all sides.

I will present my figure briefly and clearly. Draw a straight line from the top of the head (A) to the sole of the foot (H), dividing it again into seven equal parts:

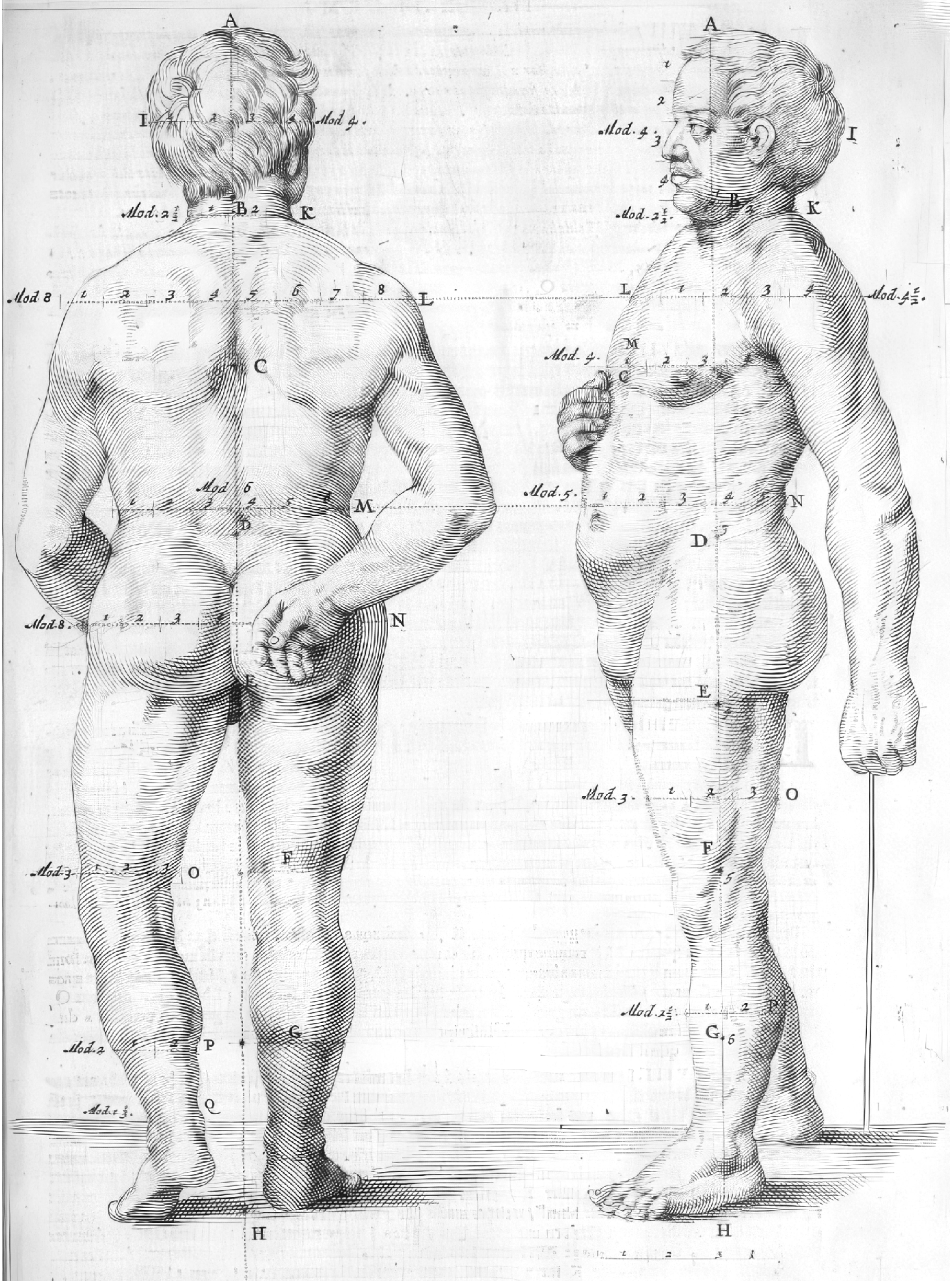
- A to B is the head
- C falls on the base of the heart
- D just above the navel
- E at the top of the thigh
- F at the knee
- G at the calf
- Finally, H is the sole of the foot

This gives us the vertical profile of the man measured in seven heads.

Now, we measure his width in profile:

- The head (I) is 4 modules
- The neck (K) is 2½ modules
- The shoulders (L) span 4½ modules, or one-sixth of the total height
- The flanks (M) are equally wide
- The hips (N) are also 4 modules
- Just above the knee (O), the width is 3 modules
- The calves (P) are 2½ modules
- The foot, finally, is one-sixth of the height, or roughly 1⅙ modules

Having now described the man of seven heads from all sides, we are ready to move on.


A
I
Mod 4.
B
K
Mod. 2½
Mod 8
1 2 3 4 5 6 7 8
L
C
Mod 6.
M
D
Mod. 8
N
E
F
Mod. 3
O
G
Mod. 2
P
Mod. 1⅔
Q
H
A
1 2 3 4
Mod. 4.
I
B
K
Mod. 2½.
L
Mod. 4½.
M
Mod. 4.
C
Mod. 5.
N
D
E
Mod. 3.
O
F
Mod. 1½.
P
G
H

The Man of Eight Heads

Having some harmony with the Doric column, it is fitting to describe his measurements, since the Doric is more noble than the Tuscan, and this figure is more proportioned than the man of seven heads.

Height (Vertical Proportions):

I draw a vertical line from the top of the head (A) to the sole of the foot (I), and divide this line into eight equal parts:

1. A to B: From the top of the head to the bottom of the chin. This first head unit is subdivided into four parts, as previously explained.
2. C (second division): Falls on the pit of the heart (sternum).
3. D (third division): Falls directly on the navel.
4. E (fourth division): Marks the pubic area, and divides the body into two equal halves.
5. F (fifth division): Reaches the bottom of the thigh.
6. G (sixth division): Lands directly on the knee.
7. H (seventh division): Passes across the calf of the leg.
8. I (eighth division): Arrives at the sole of the foot.

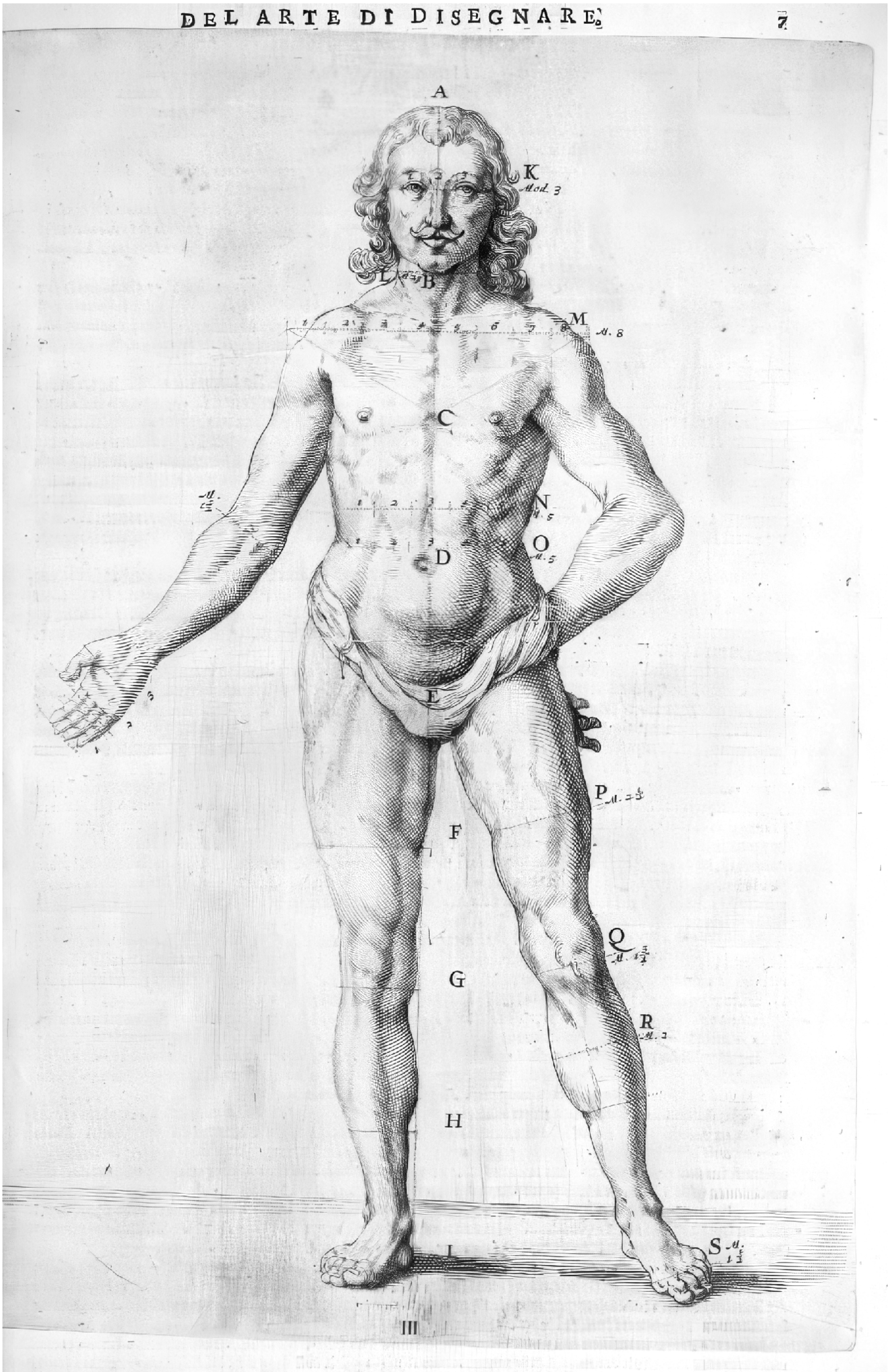
Thus, the total height of the figure is 8 heads or 23 modules in length.

Width (Horizontal Proportions):

Now let us speak of his width, using modules derived from head measurements:

- Face width (K): 3 modules
- Neck width (L): 2 modules
- Shoulders (M): 2 heads wide, or 6 modules
- Flanks (N): 6 modules
- Hips (O): 7 modules
- Upper thigh (P): 5 modules
- Knees (Q): 4½ modules

- Calf (R): 3 modules
- Toes (S): 2 modules


DEL ARTE DI DISEGNARE
7
A
K
Mod. 3
L
B
M
M. 8
C
N
M. 5
O
M. 5
D
E
P
F
Q
G
R
M. 2
H
I
S
III

The Man of Eight Heads – Back View and Profile

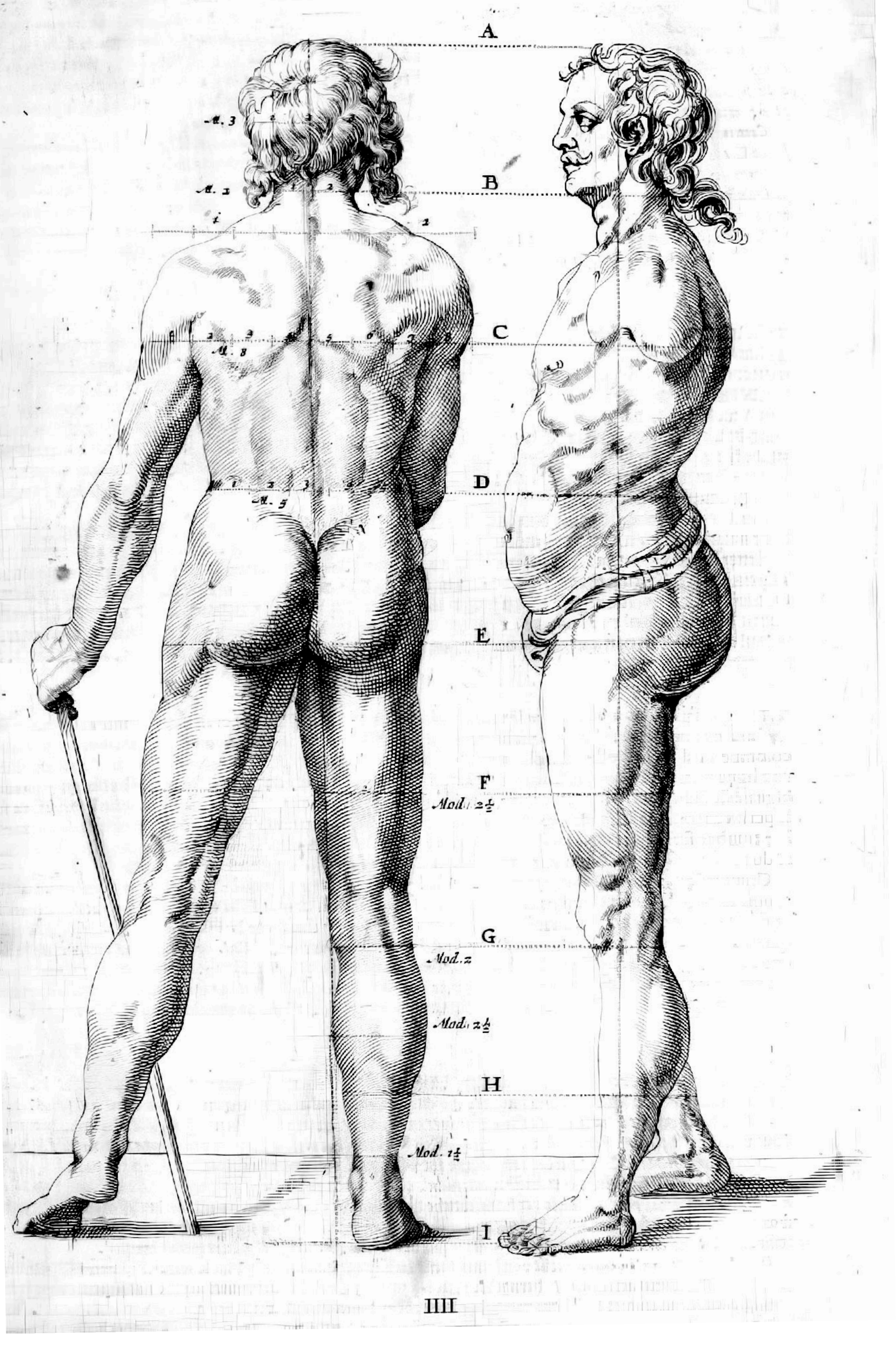
Back View – Vertical Proportions

After having depicted my man of eight heads from the front,
it is now necessary to represent and describe him from behind.

A vertical line is drawn from the top of the head (A) to the sole of the foot (I).
This line is divided into seven equal parts, corresponding to the seven-head unit structure:

1. A–B: The first unit, which reaches just below the neck (the base of the chain, possibly the nape).
2. C: The second division, which lands at the small of the back (the lumbar hollow).
3. D: The third division, which reaches the end of the spine (sacrum or coccyx).
4. E: The fourth, reaching the end of the buttocks.
5. F: The fifth, descending over the thigh.
6. G: The sixth, which runs straight across the knee.
7. H: The seventh, marking the calf of the leg, ending at:
8. I: The sole of the foot.

This describes the height and divisions of the figure from the rear.


A
M. 3
M. 2
1
2
B
C
M. 8
D
M. 5
E
F
Mod. 2½
G
Mod. 2
Mod. 2½
H
Mod. 1½
I

IIII

Side View – Vertical Proportions

Now, turning the figure in profile, we again draw a vertical line from the top of the head (A) to the sole of the foot (I), divided into eight parts this time:

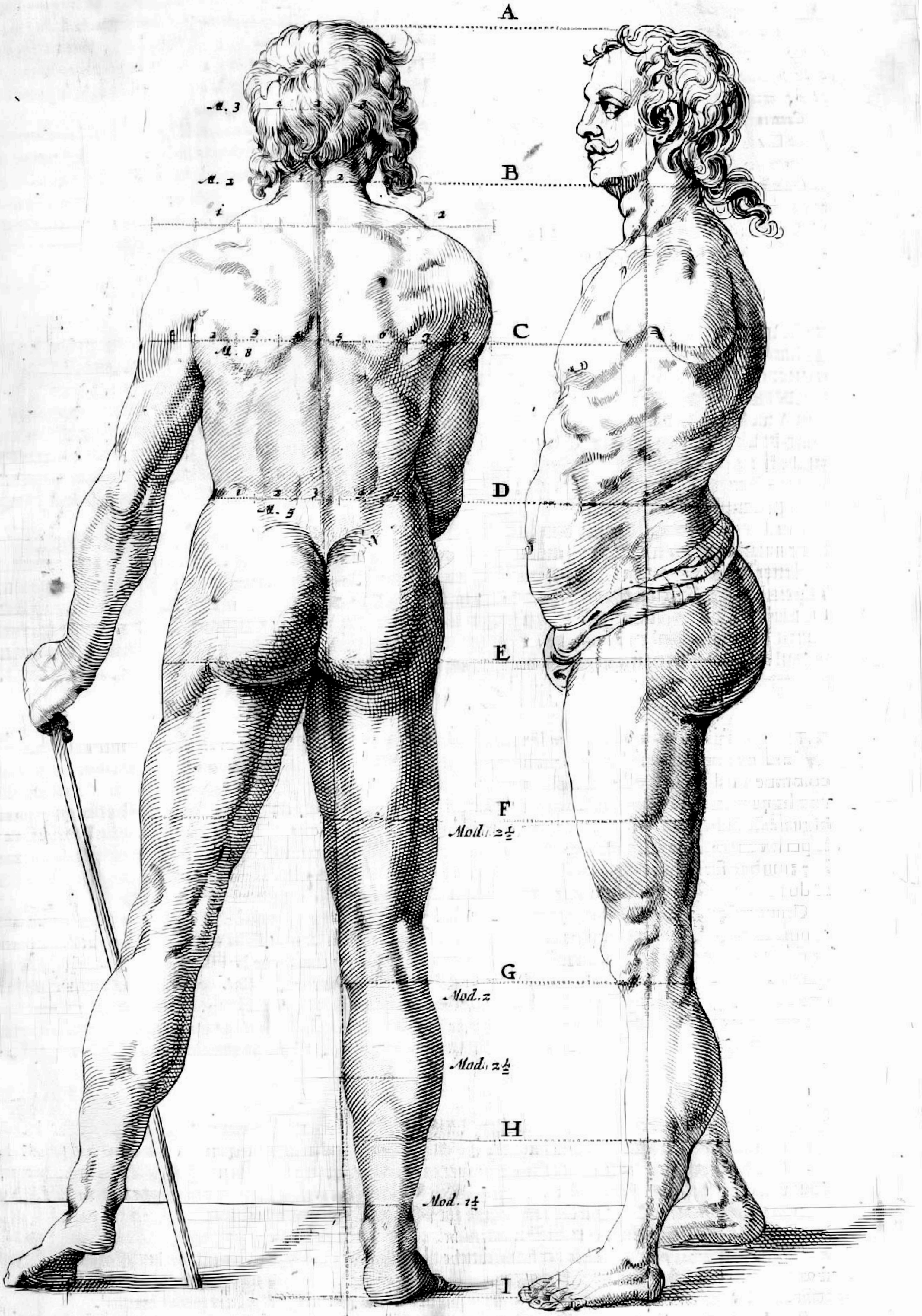
1. A–B: The head.
2. C: Passes the armpits and touches the pit of the heart.
3. D: Falls across the side of the torso.
4. E: Lies just above the genitals.
5. F: Falls over the upper thigh.
6. G: Sits on the knee.
7. H: Passes over the calf.
8. I: Reaches the sole of the foot.

Side View – Width Proportions

Speaking briefly about the width:

- A: The head width is measured between the two ears: 3 modules.
- B: The neck: 2.5 modules.
- C: The concavity of the back: 3 modules.
- E: The hips: 8 modules.
- F: The thigh: 5 modules.
- G: The joint (probably the knee): 2 modules.
- H: The calf: 2.5 modules.
- I: The ankle (narrowest part above the heel): 1.5 modules.

This completes the description of the man of seven heads as viewed from the back and in profile.


A
M. 3
M. 2
B
C
M. 8
D
M. 5
E
F
Mod. 2½
G
Mod. 2
Mod. 2½
H
Mod. 1½
I

IIII

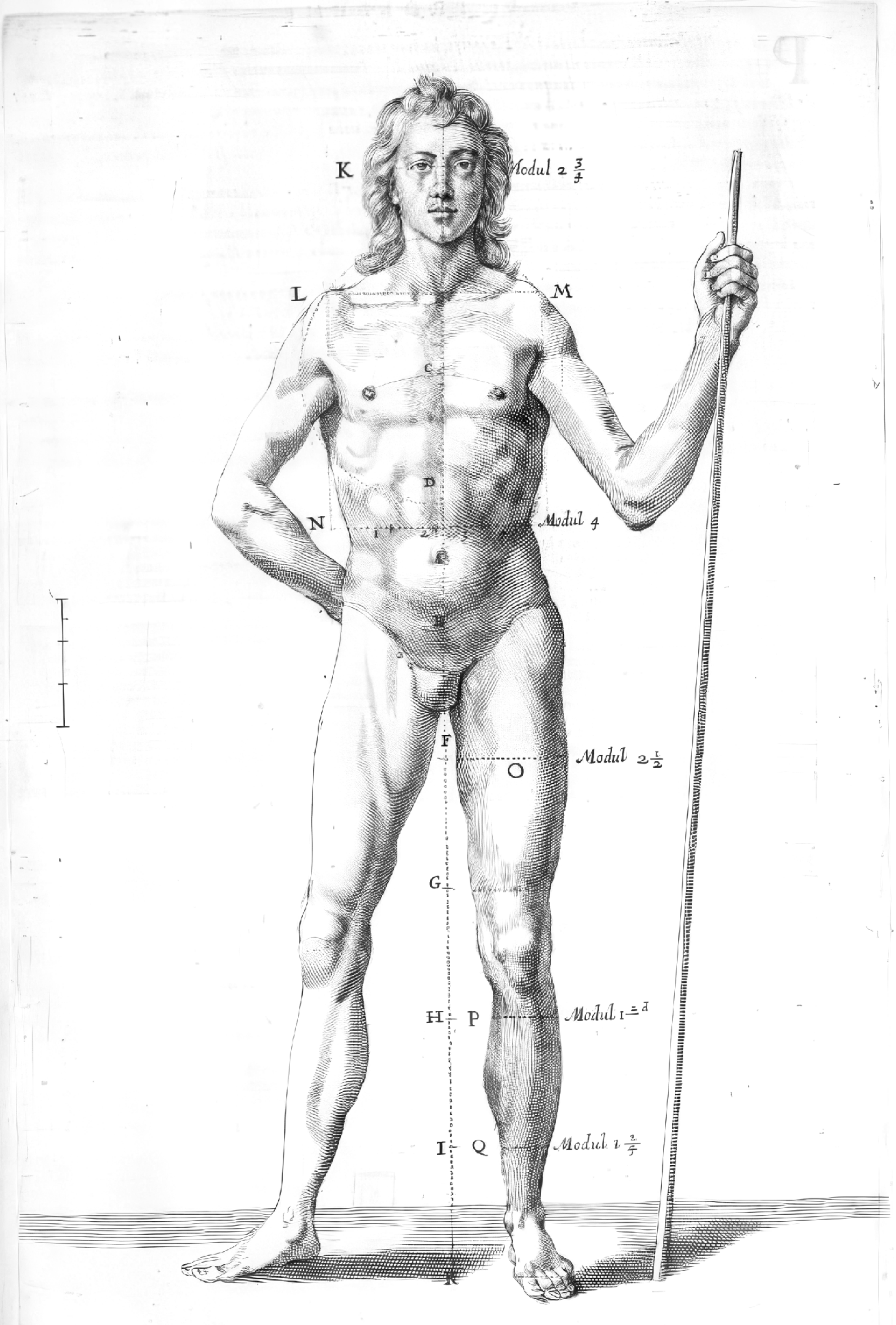
On the Correspondence Between the Proportions of Columns and of Man – The Man of Nine Heads

Since there is a correspondence between the proportions of classical columns and those of the human body (as has been said),
we will now present a man of nine heads in height, for comparison with the noble Ionic column,
which is considered more excellent than the Doric, and no less beautiful.

We begin by drawing a vertical line, a straight axis, from the top of the head (A) down to the sole of the foot (K),
and we divide this line into nine equal parts:

- A–B: The head.
- C: The line falls beneath the pit of the heart.
- D: Passes over the loins (lower back).
- E: The lower abdomen (small centre).
- F: Over the thickest part of the leg.
- G: The knee joint.
- H: Lands on the calf (specifically, the fleshy part).
- I: The ankle.
- K: The sole of the foot.

This completes the vertical height division.


K
Modul 2 3/4
L
M
C
D
N
1
2
Modul 4
F
O
Modul 2 1/2
G
H
P
Modul 1 2/3
I
Q
Modul 1 2/5
R

V

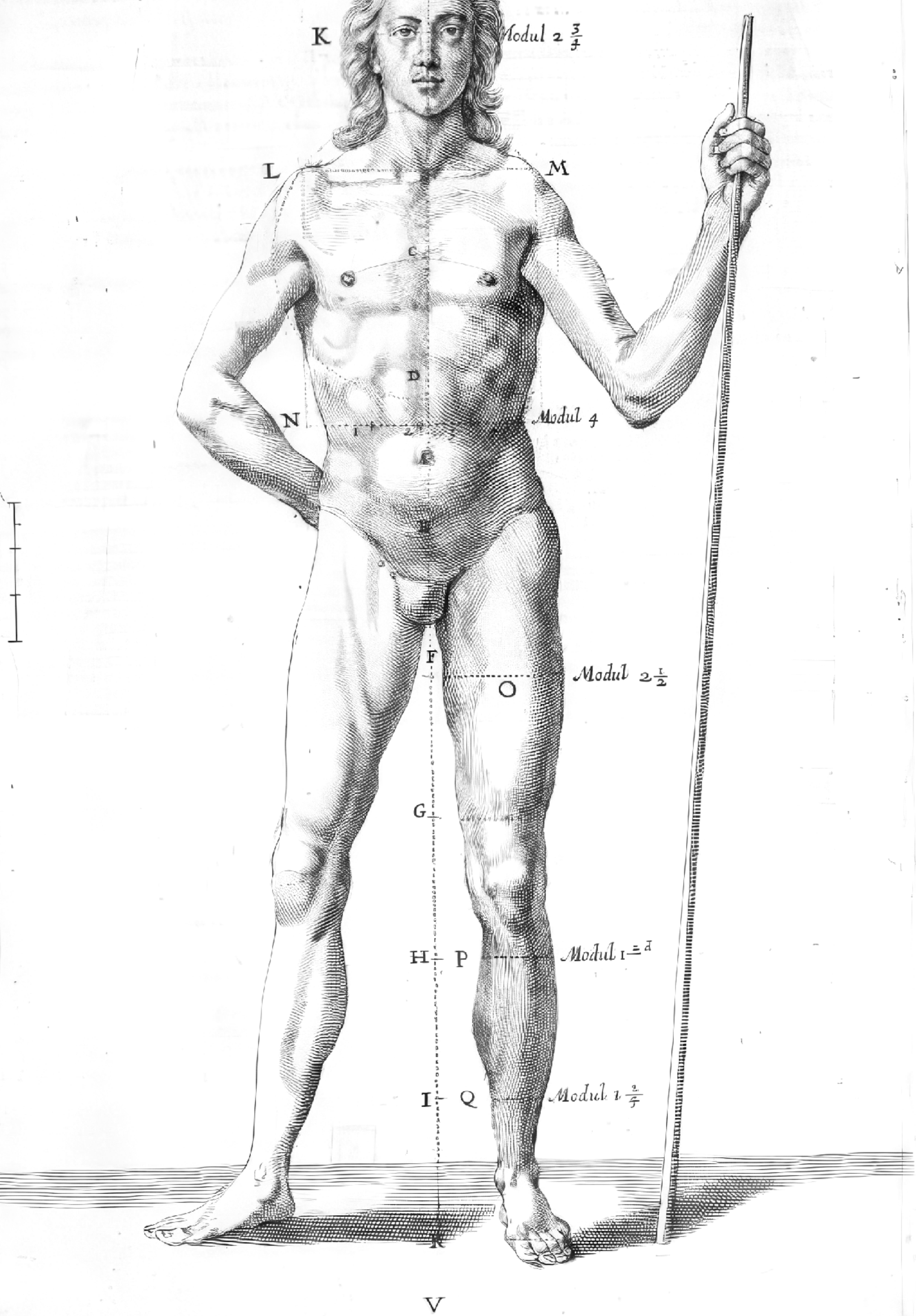
On the Width

Now we turn to the figure's width, which must also be understood.

- Starting with the head (K), which measures 2½ modules between the two ears.
- Place the compass at C, which crosses the chest area, and mark out points L and M, which determine the width of the shoulders.
  These are also the origins of the arms.
- The waist (at S) is 4 modules, or the width of two faces.
- Moving down to the thighs (O), the width is 4 modules — that is, 2 modules for each side.
- The knee area (P) measures 2½ modules.
- The calf (Q) is 1 module.
- Finally, the ankles and foot width (R) are each 1 module,
  or approximately one-ninth of the total height.

Conclusion

Let us now pause, for what has been presented and described is sufficiently clear for our purposes.


K
Modul 2 3/4
L
M
C
D
N
1 2 3
Modul 4
E
F
Modul 2 1/2
O
G
H
P
Modul 1 2/3
I
Q
Modul 1 2/5
R

V

To Better Express the Variations in Proportion: The Man of Nine Heads

To more clearly illustrate the variations of bodily proportions,
it is necessary to pose my man of nine heads as a problematic model,
viewed from behind. This is because such statures are highly esteemed among painters and sculptors in France.

We begin by drawing a vertical line from point A to K,
and we divide this line into nine equal parts:

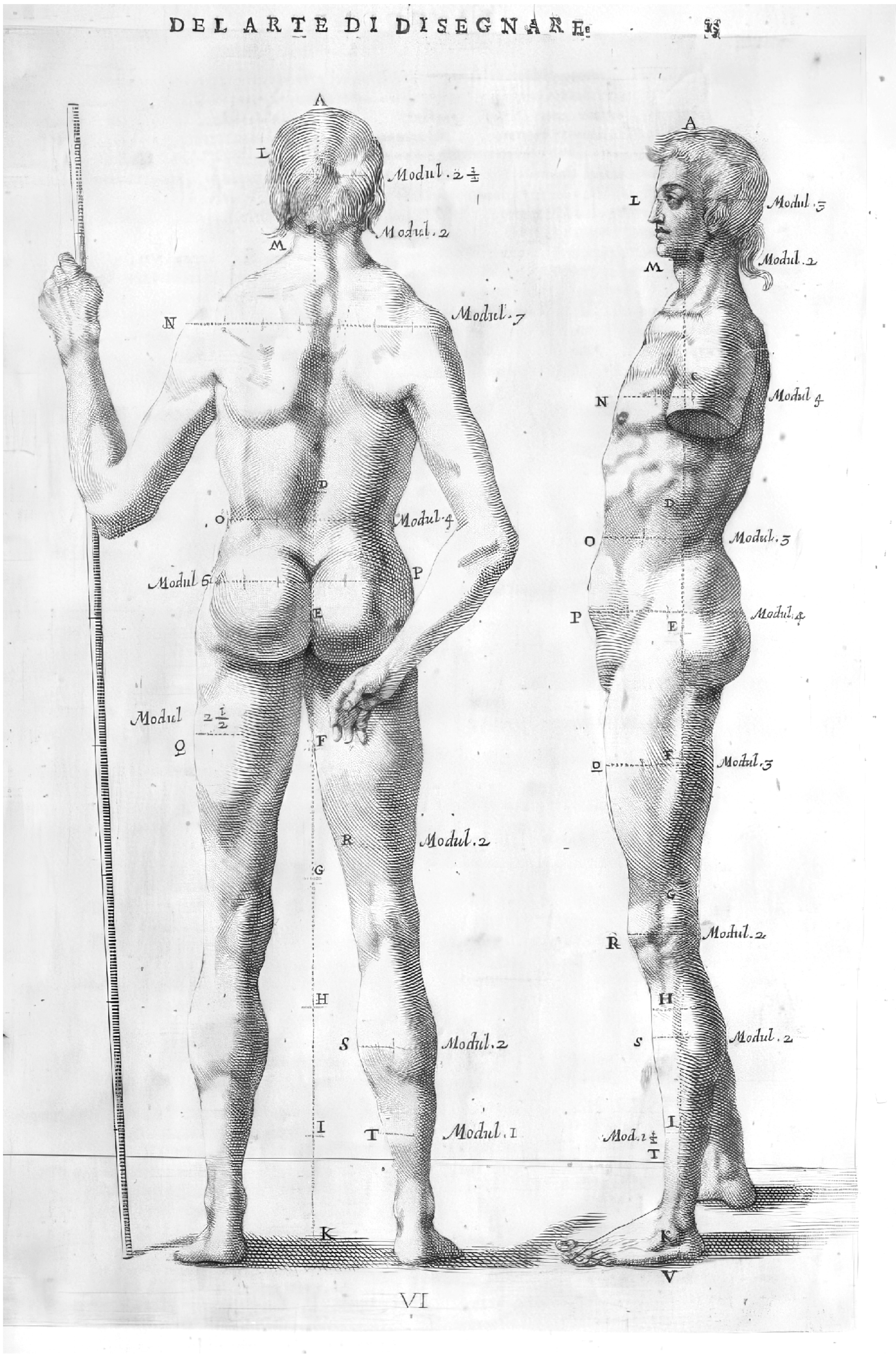
- A–B: The head.
- C: The hollow of the back.
- D: The belt line or waist.
- E: The centre of the buttocks.
- F: The top of the thigh.
- G: The lower part of the thigh, just above the knee joint.
- H: The calf, or thickest part of the leg.
- I: The ankle or tapering part of the leg.
- K: The sole of the foot.

Width (Seen from Behind)

Now we describe the width, beginning from the top:

- The head (between the ears): 5 modules.
- The neck (M): 2 modules.
- The back between the shoulders (N): 8 modules.
- Above the hips (O): 6 modules.
- Across the buttocks (P): 8 modules.

- Top of the thigh (Q): 6 modules.
- Above the knee joint (R): 2 modules.
- The calf (S): approximately 2½ modules.
- The narrow part of the leg (T): approximately 1½ modules.


DEL ARTE DI DISEGNARE &c
A
L
Modul. 2 ½
M
Modul. 2
N
Modul. 7
D
O
Modul. 4
Modul 6
P
E
Modul 2 ½
Q
F
R
Modul. 2
G
H
S
Modul. 2
I
T
Modul. 1
K
VI
A
L
Modul. 3
M
Modul. 2
N
Modul 4
D
O
Modul. 3
P
E
Modul. 4
Q
F
Modul. 3
G
R
Modul. 2
H
S
Modul. 2
I
Mod. 2 ½
T
K
V

The Profile View of the Nine-Head Figure

Let us briefly describe our nine-head man in side profile.
As before, draw a vertical line from A to K,
and divide it into nine equal parts:

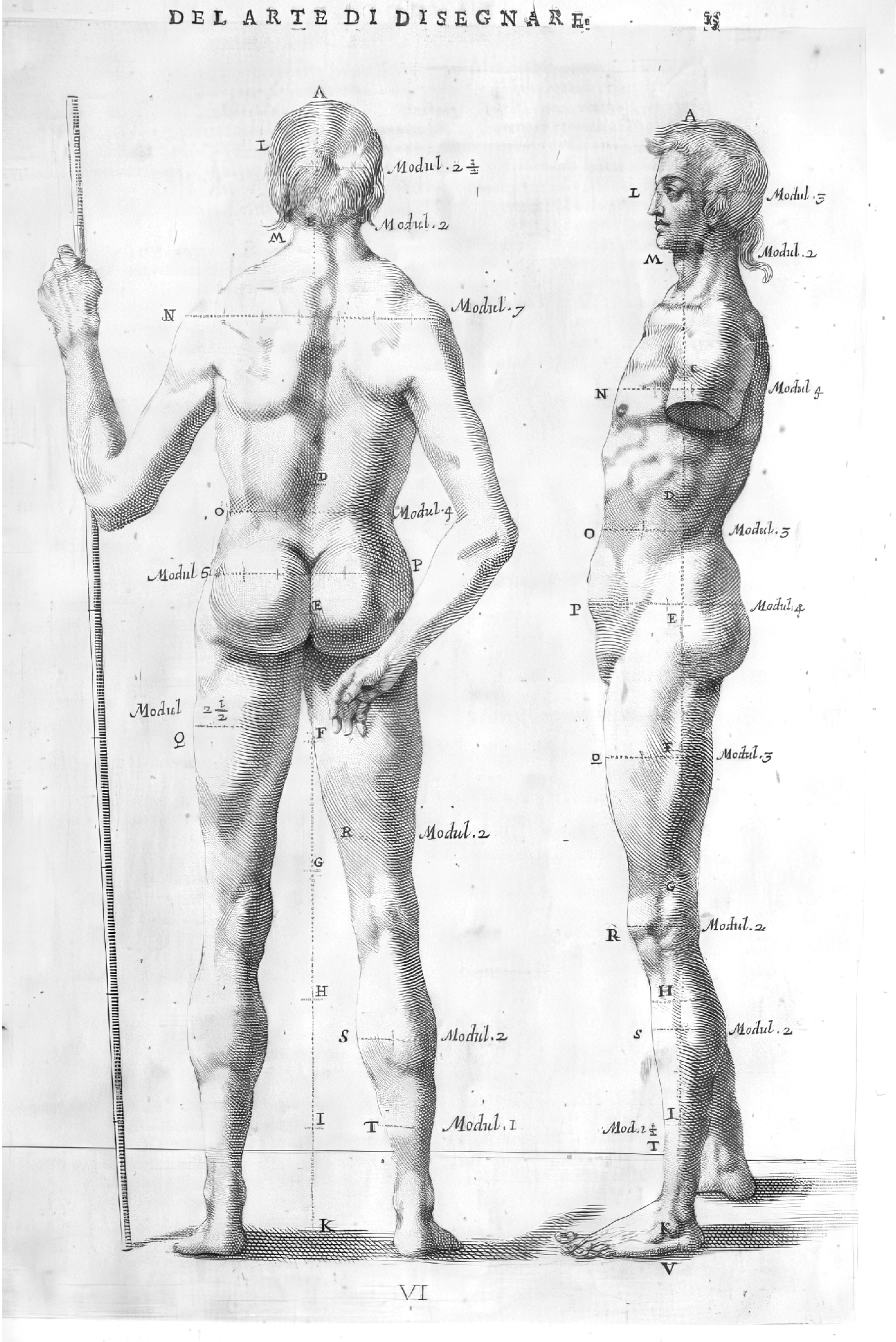
- A–B: The head.
- C: The pit of the heart (top of the chest).
- D: The side of the torso.
- E: The seat (buttocks).
- F: The pubic region.
- G: The lower thigh.
- H: The knee.
- I: Below the calf.
- K: The sole of the foot.

Width (in Profile)

- The head (L): 3 modules.
- The neck (M): 2 modules.
- The armpits (N): 4 modules.
- Above the flanks/hips (O): 3½ modules.
- Across the buttocks (P): 4 modules.
- Thigh (Q): 3 modules.
- Above the knee (R): 2½ modules.
- Below the knee (S): 2 modules.
- Calf (T): 1½ modules.
- Sole of the foot (V): 6 modules in length.

This gives a full representation of the man of nine heads,
shown from the back and in profile,
noting both height and width of each body segment.

The figure is understood to be nine times the height of the head, in accordance with idealised proportions comparable to classical architecture.


DEL ARTE DI DISEGNARE
A
L
Modul. 2 1/2
M
Modul. 2
N
Modul. 7
D
O
Modul. 4
Modul 6
P
E
Modul 2 1/2
Q
F
R
Modul. 2
G
H
S
Modul. 2
I
T
Modul. 1
K
A
L
Modul. 3
M
Modul. 2
N
Modul 4
D
O
Modul. 3
P
E
Modul. 4
Q
F
Modul. 3
G
R
Modul. 2
H
S
Modul. 2
I
Mod. 1 1/2
T
V
VI

The Man of Ten Heads: Compared to the Corinthian Column

Since the stature of tall and slender men, when not excessively tall, is not displeasing to the eye,
I wish to describe my man of ten heads and compare him to the Corinthian column.

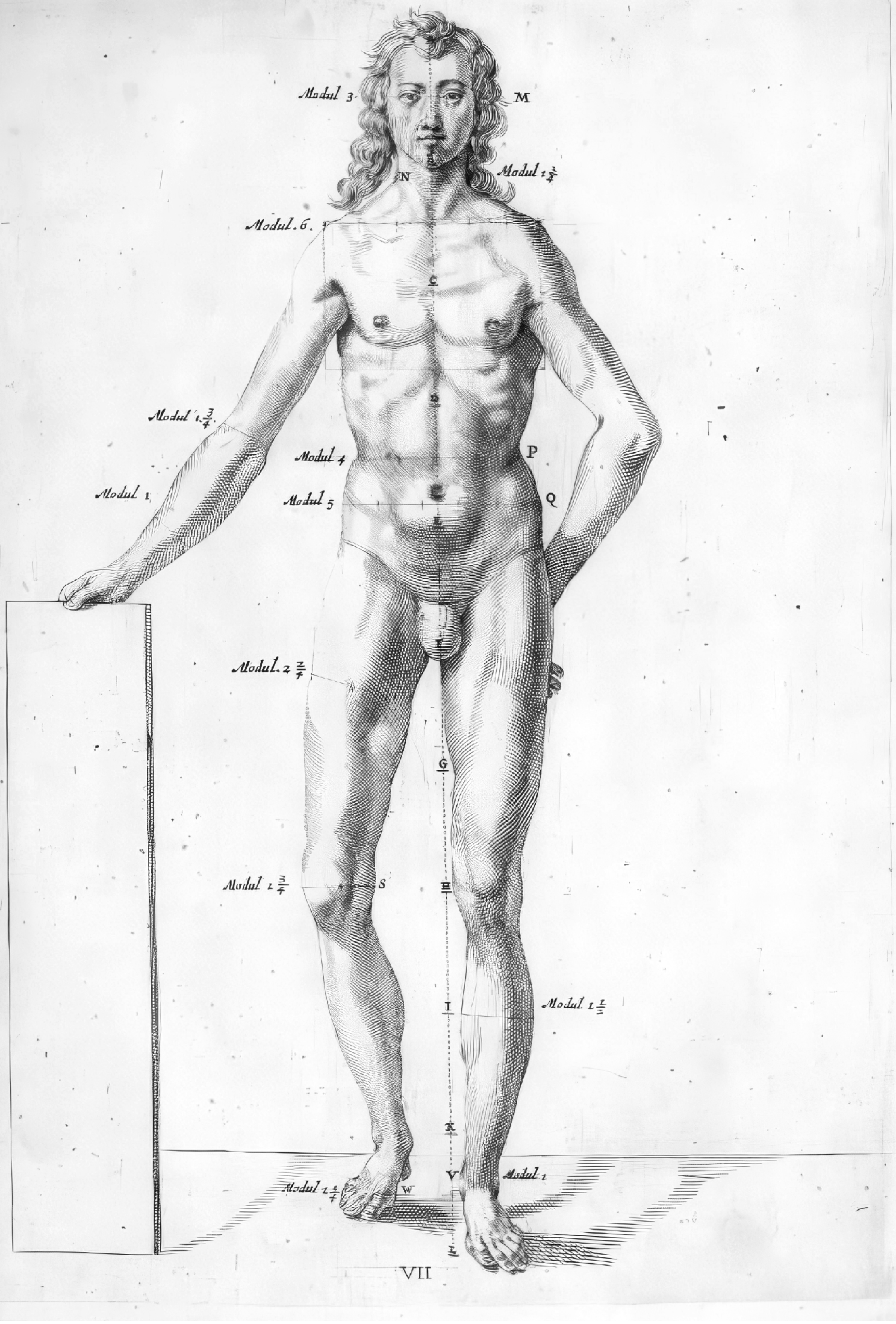
Although the Corinthian is taller and more elevated than the other orders,
its graceful proportions and harmonious assembly of parts,
without any deformity, still make it pleasing to behold.

To clarify this further, the figure can be drawn in the following way:

Height: Ten Equal Parts

Draw a vertical line from the top of the head (A) to the sole of the foot (L)
and divide it into ten equal parts:

1. A–B: The head.
2. B–C: Crosses the pit of the heart.
3. C–D: Traverses the side of the ribcage.
4. D–E: Falls directly on the navel.
5. E–F: Touches the pubic region (the “honourable part”).
6. F–G: Passes across the top of the thigh.
7. G–H: Comes just above the knees.
8. H–I: Falls on the thickest part of the lower leg (calf).
9. I–K: Passes just above the ankle joint.
10. K–L: Touches the sole of the foot.


Modul 3
M
N
Modul 1 $\frac{2}{4}$
Modul. 6.
C
D
Modul 1 $\frac{3}{4}$.
Modul 4
P
Modul 1
Modul 5
Q
E
F
Modul. 2 $\frac{2}{4}$
G
Modul 1 $\frac{3}{4}$
S
H
I
Modul 1 $\frac{1}{2}$
K
V
Modul 1
Modul 1 $\frac{1}{4}$
W
Z

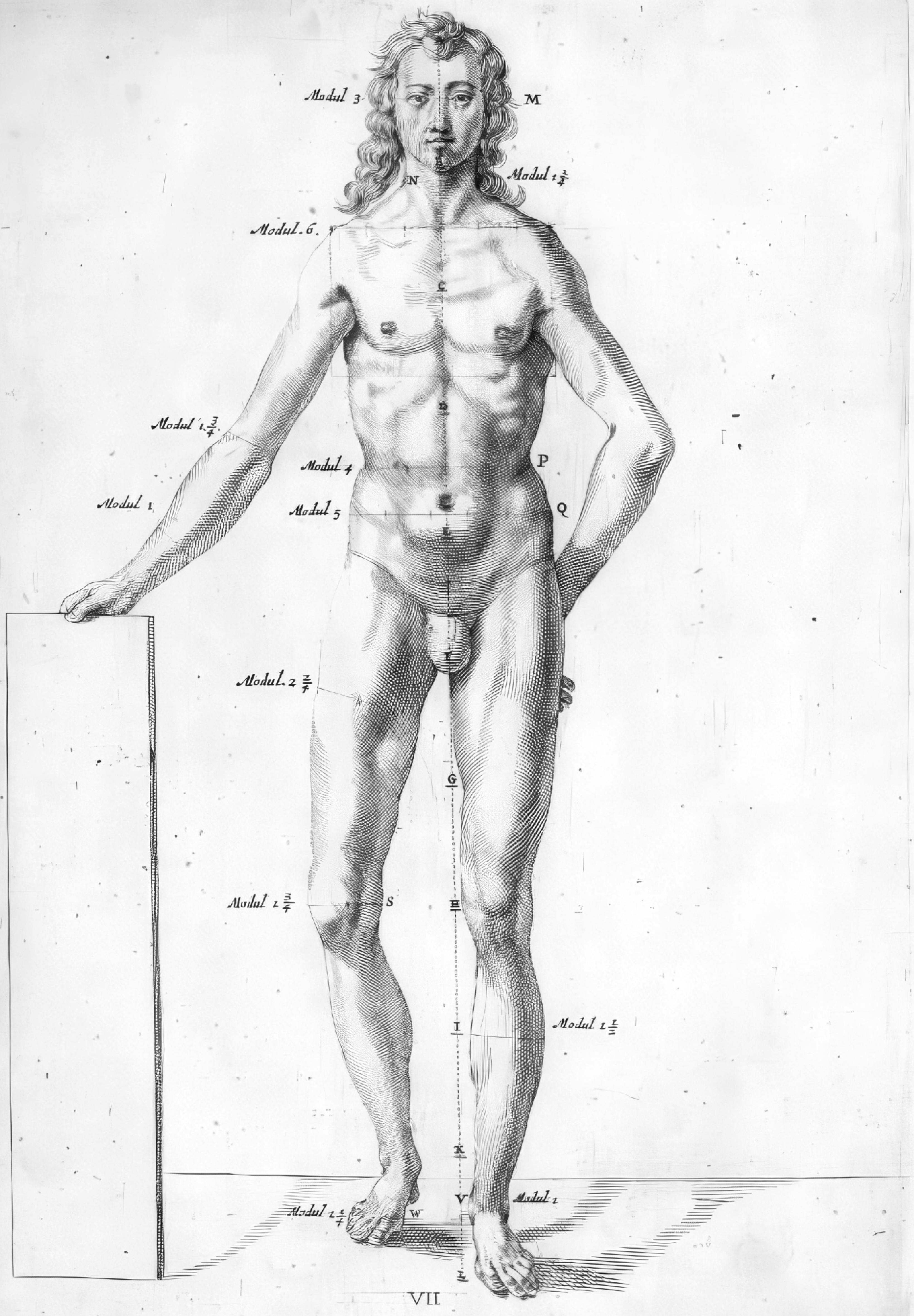
VII

Width: Measured in Modules

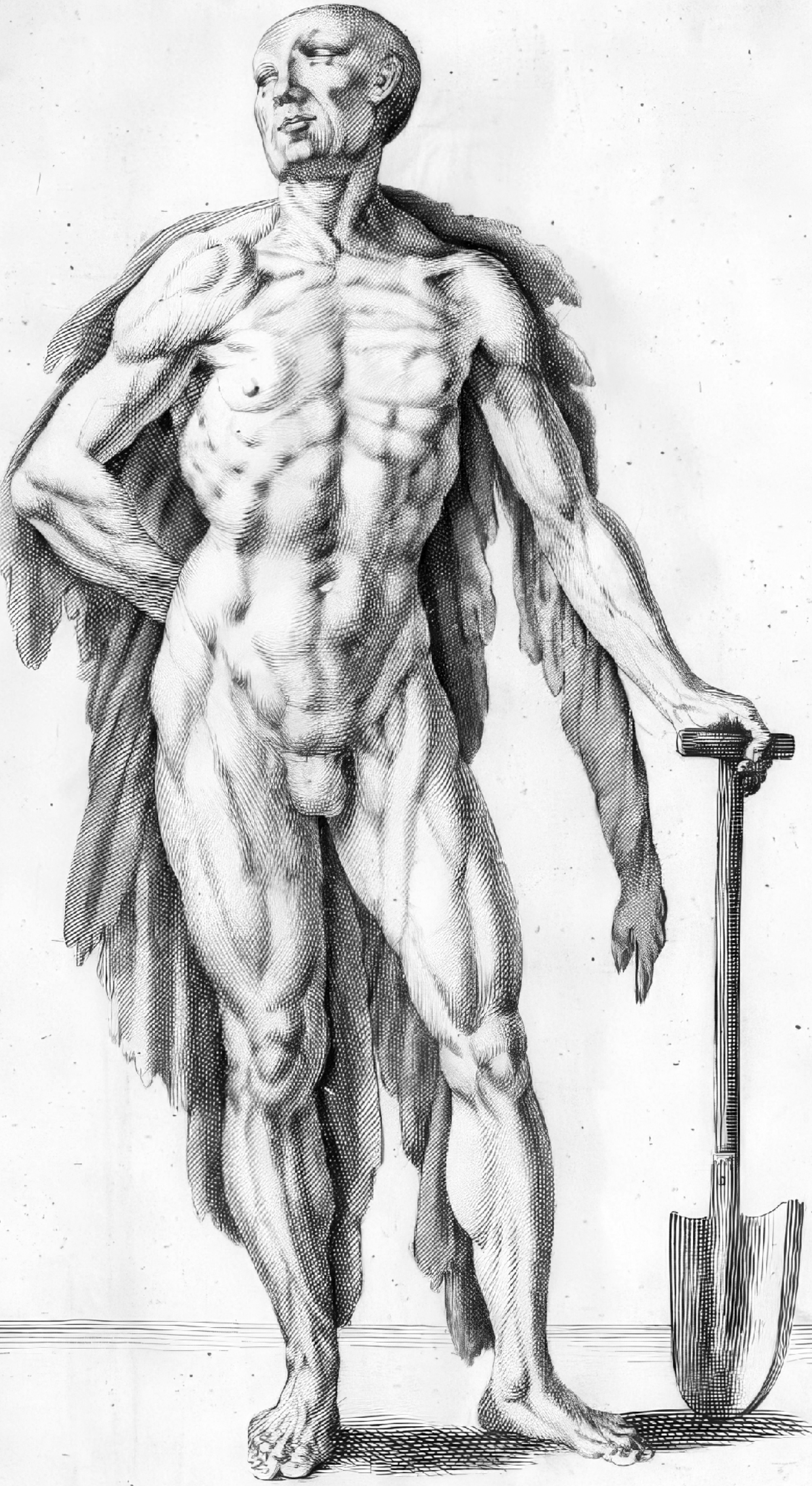
Now that we have defined the height, let us consider the width of each segment:

- Face (M), measured across the eyes: 3 modules.
- Neck (N): 1½ modules.
- Shoulders (O): 6 modules.
- Flanks / ribcage (P): 4 modules.
- Hips (Q): 5 modules.
- Thighs (R): 4½ modules.
- Knees (S): 1½ modules.
- Calf (T): 1¼ modules.
- Above the ankles (V): 1 module.
- Toes (W): ¾ of a module,
  or 1/14th of the total height.

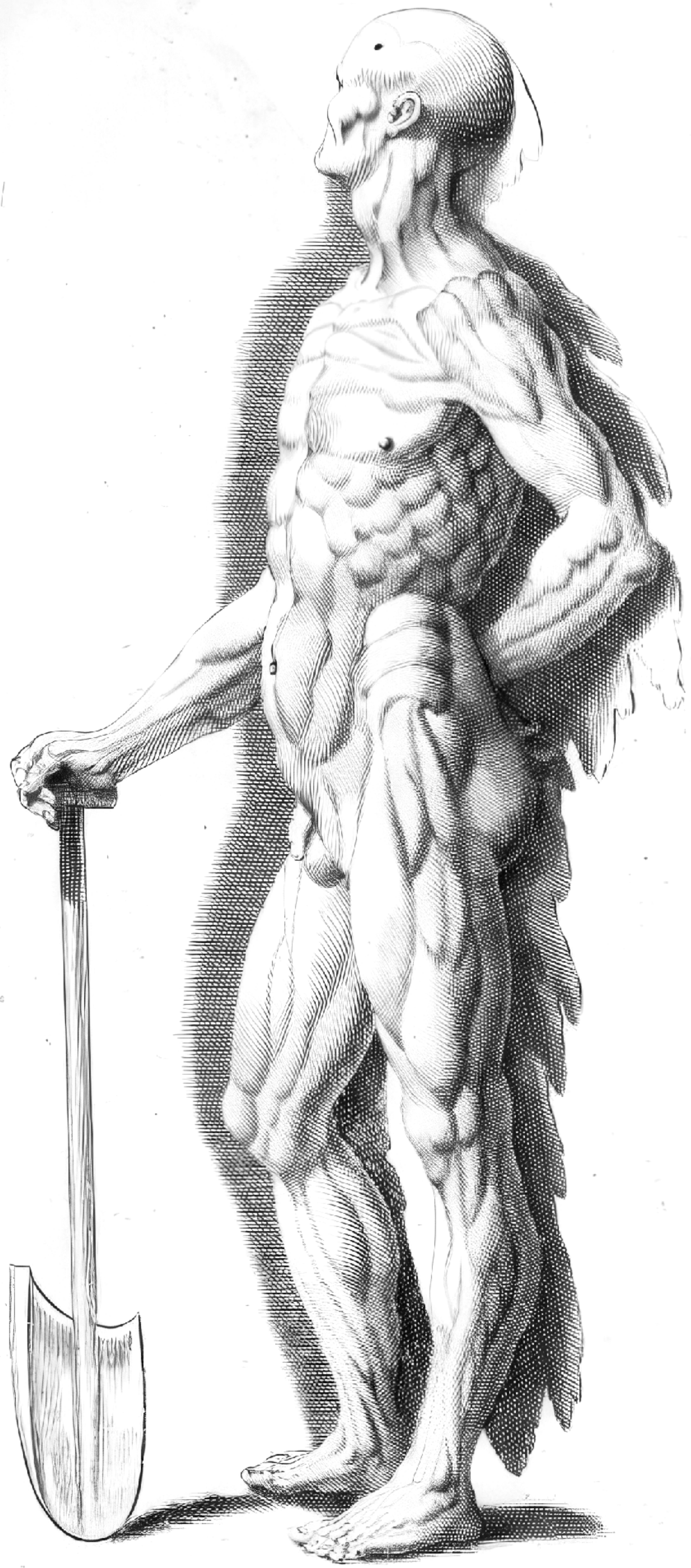
This completes the description of the man of ten heads,
an idealised figure that reflects elegance through length and proportion—
like the Corinthian column, which it was designed to echo in human form.

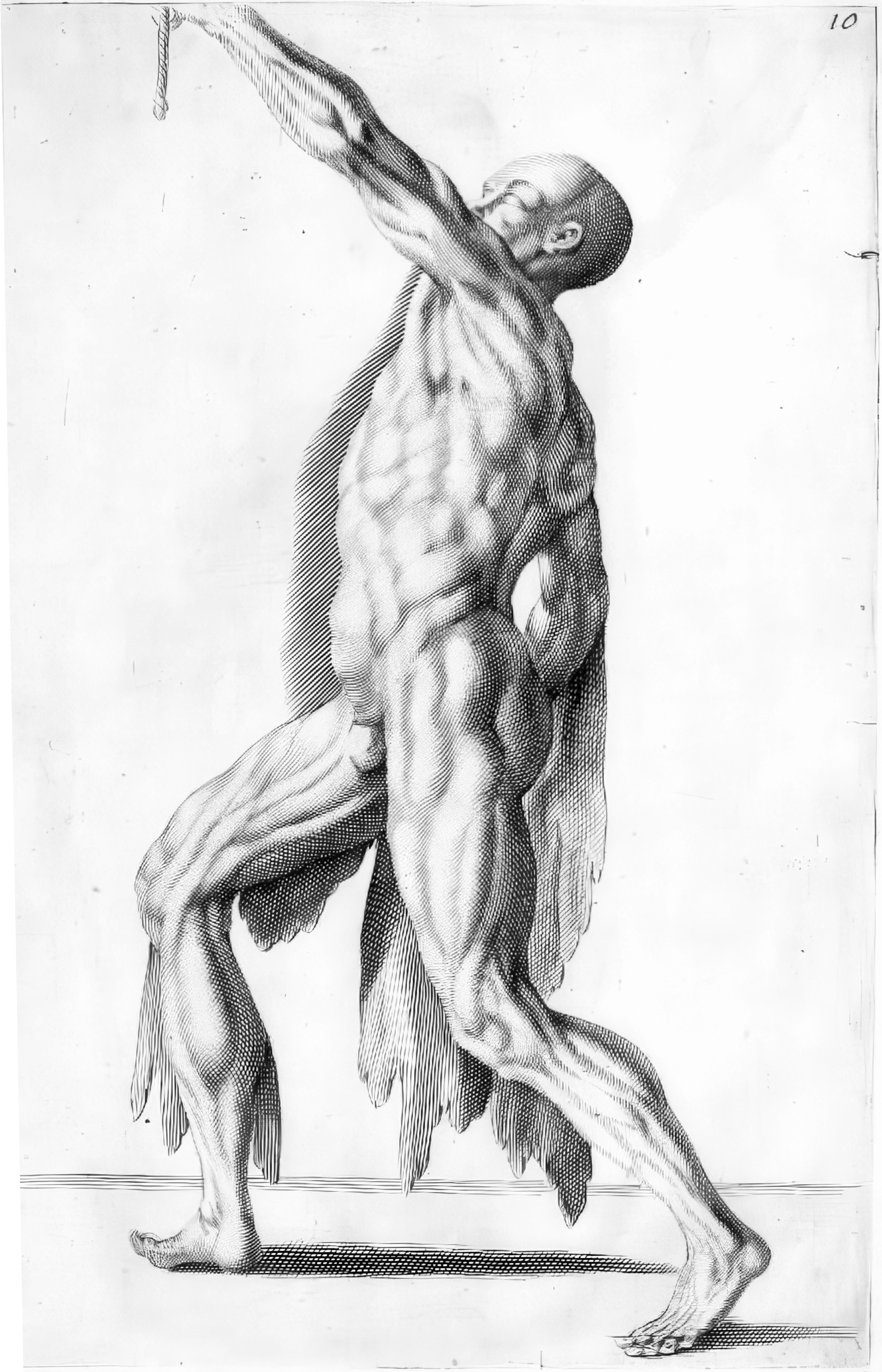

Modul 3
M
B
N
Modul 1 3/4
Modul. 6.
C
D
Modul 1 3/4
Modul 4
P
Modul 1
Modul 5
Q
E
F
Modul. 2 2/4
G
Modul 1 3/4
S
H
I
Modul 1 1/2
X
V
Modul 1
Modul 1 1/4
W
Z

VII

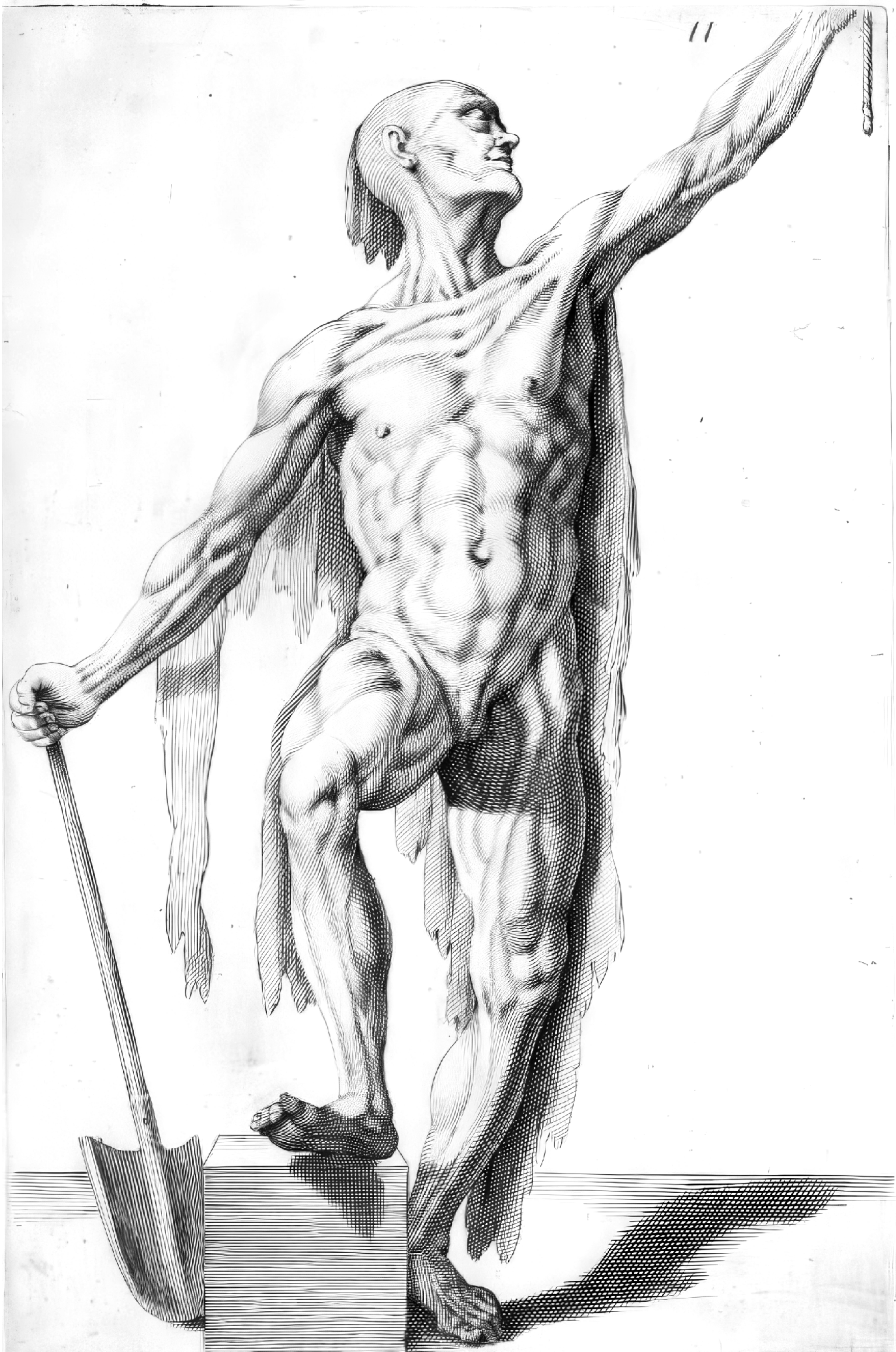


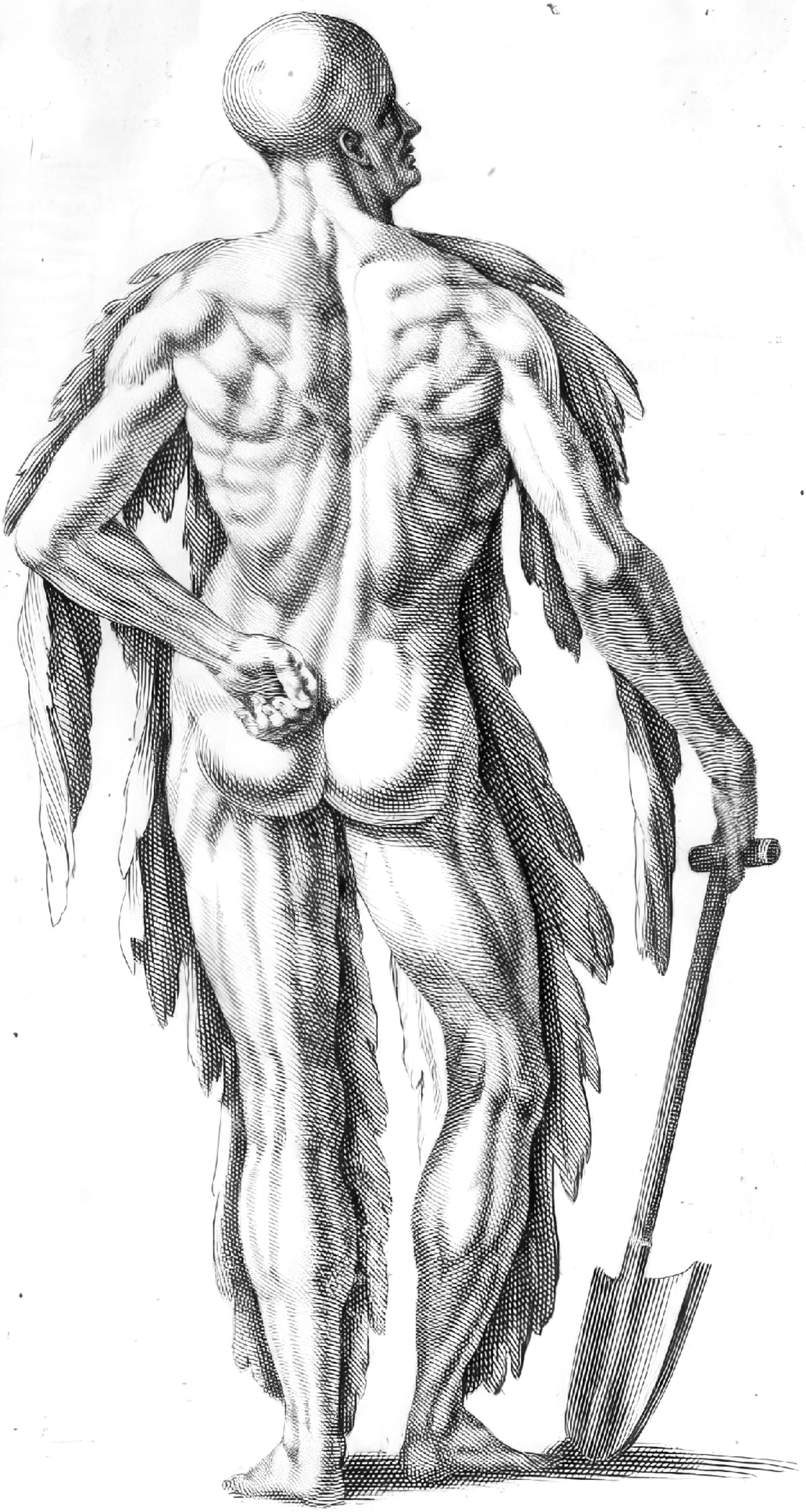
9

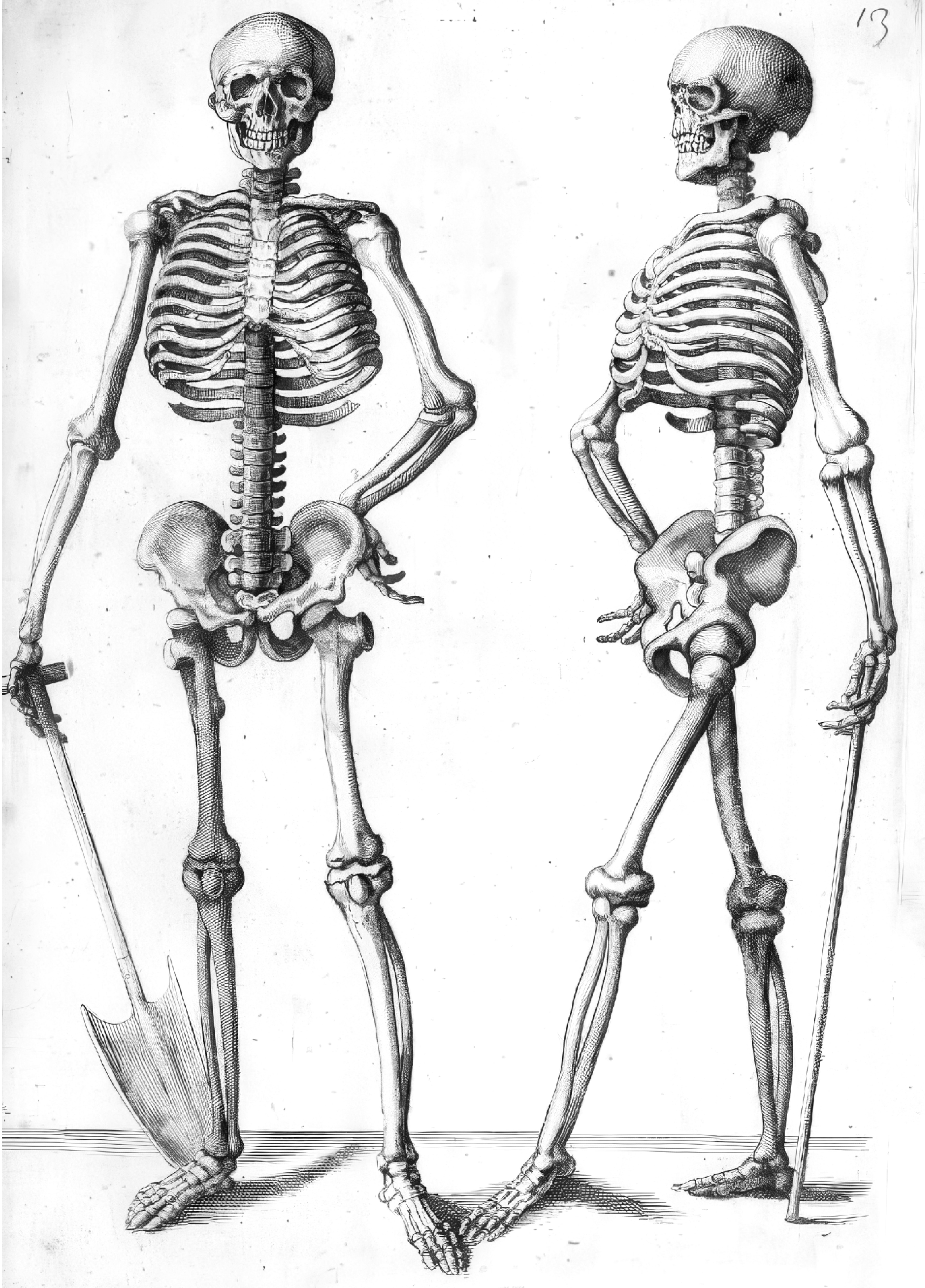


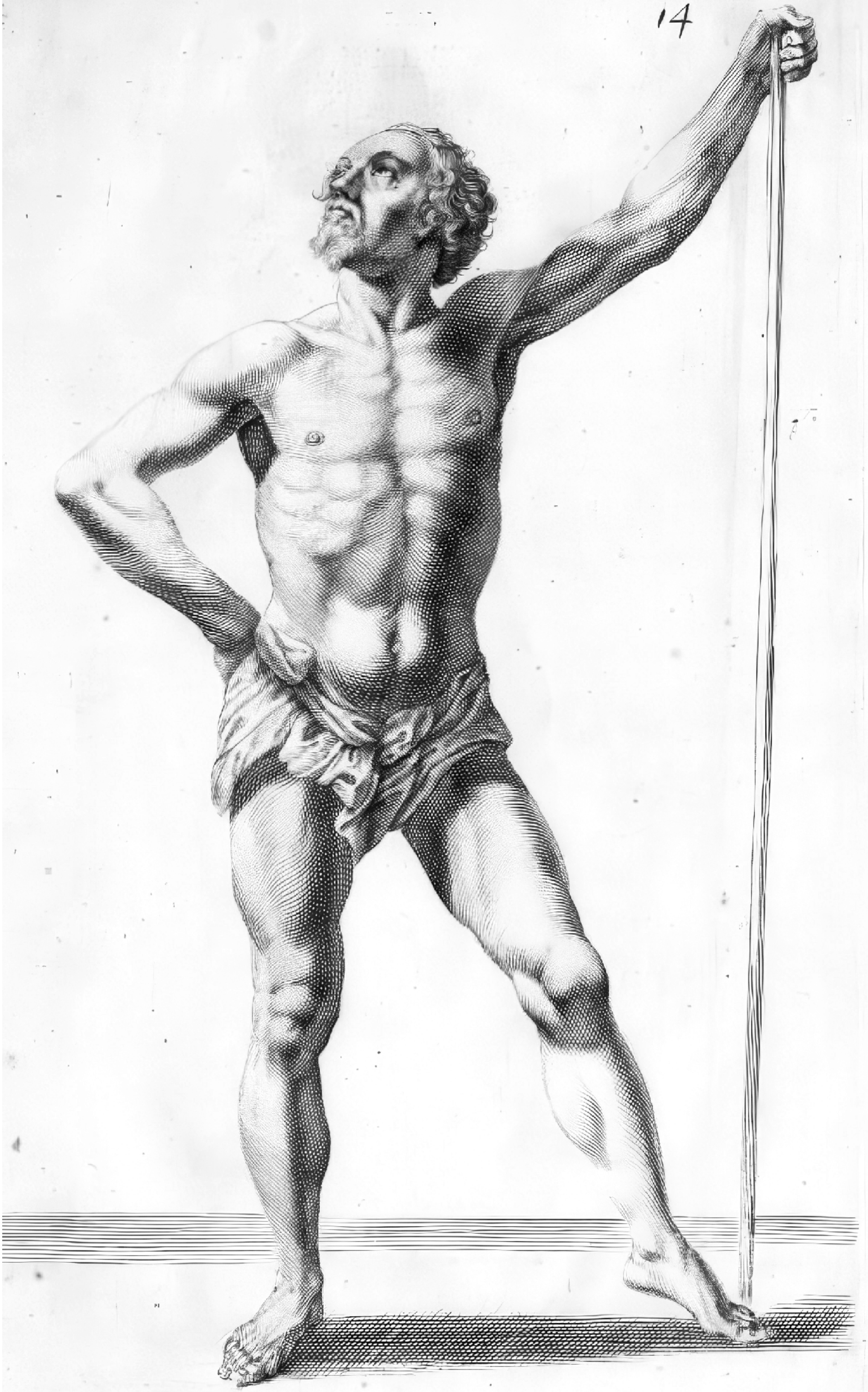


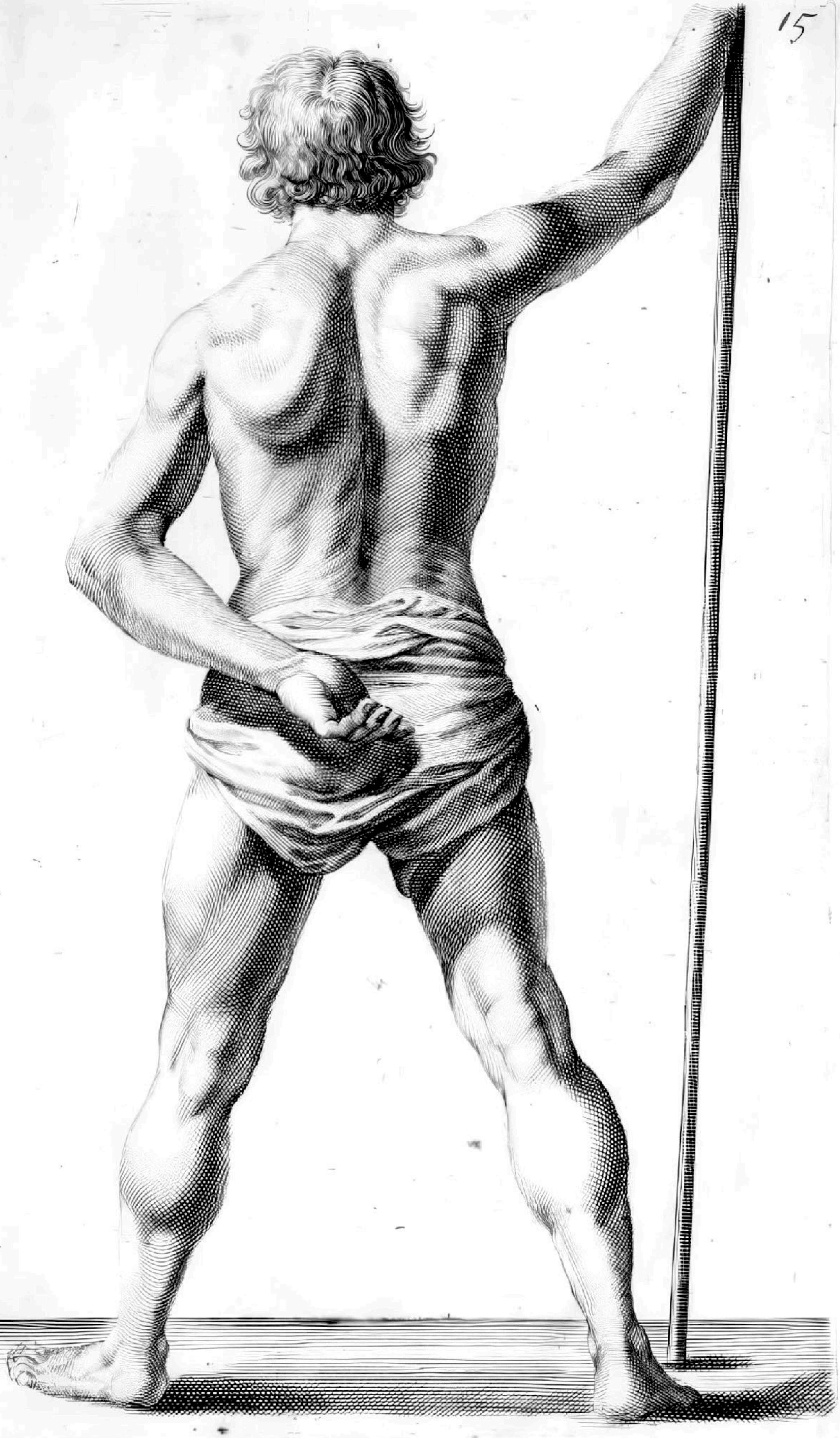
11

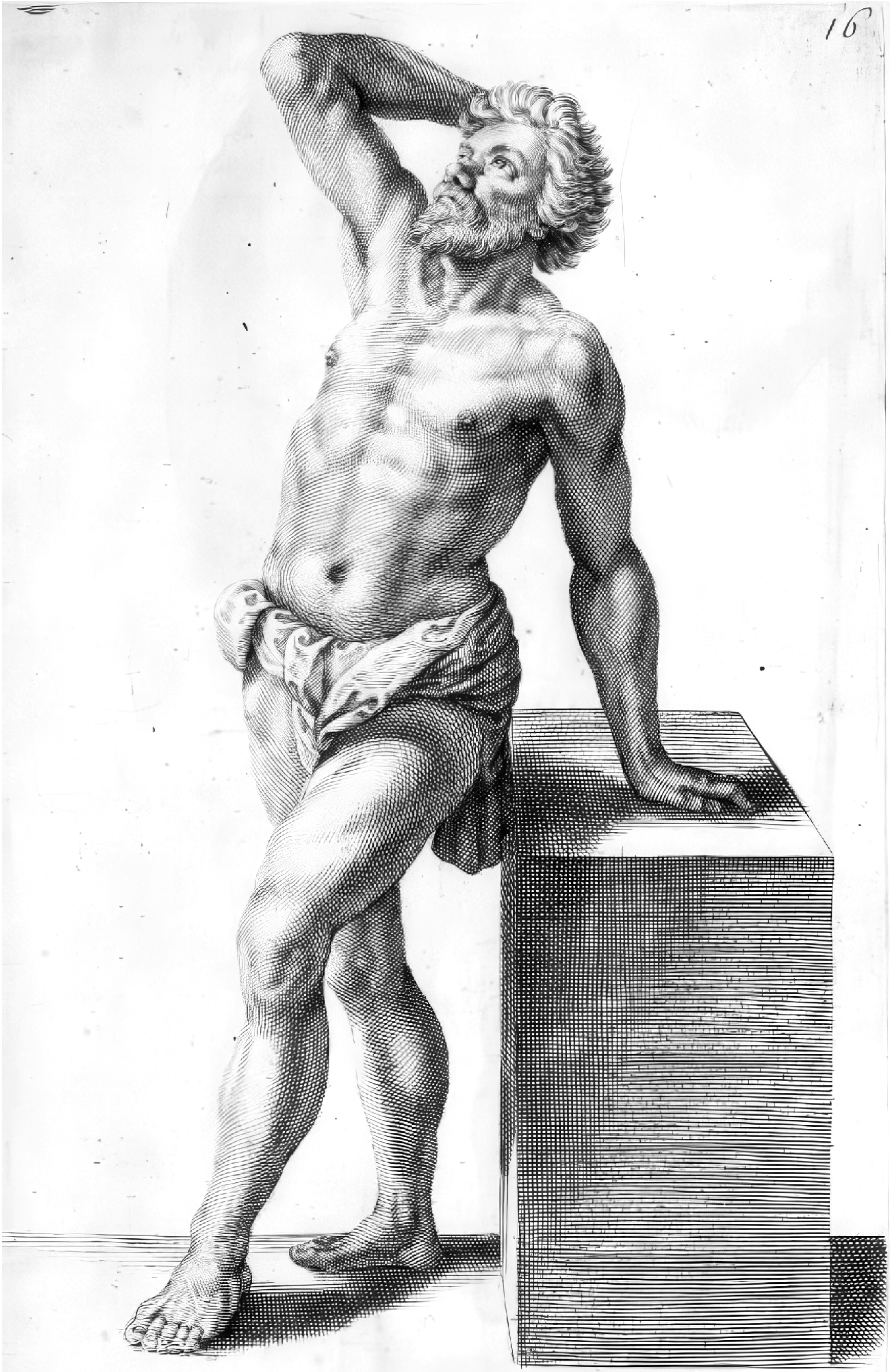


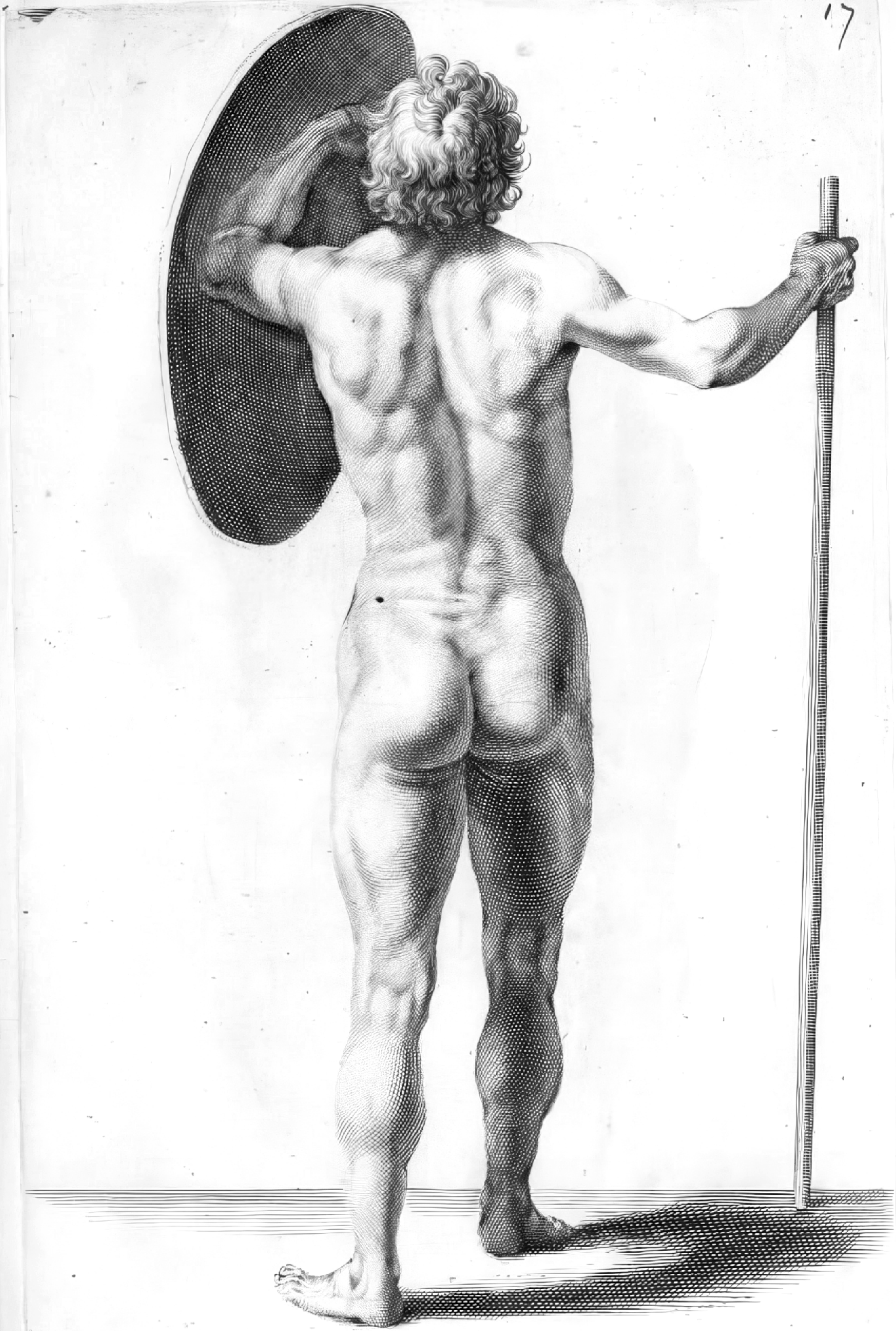


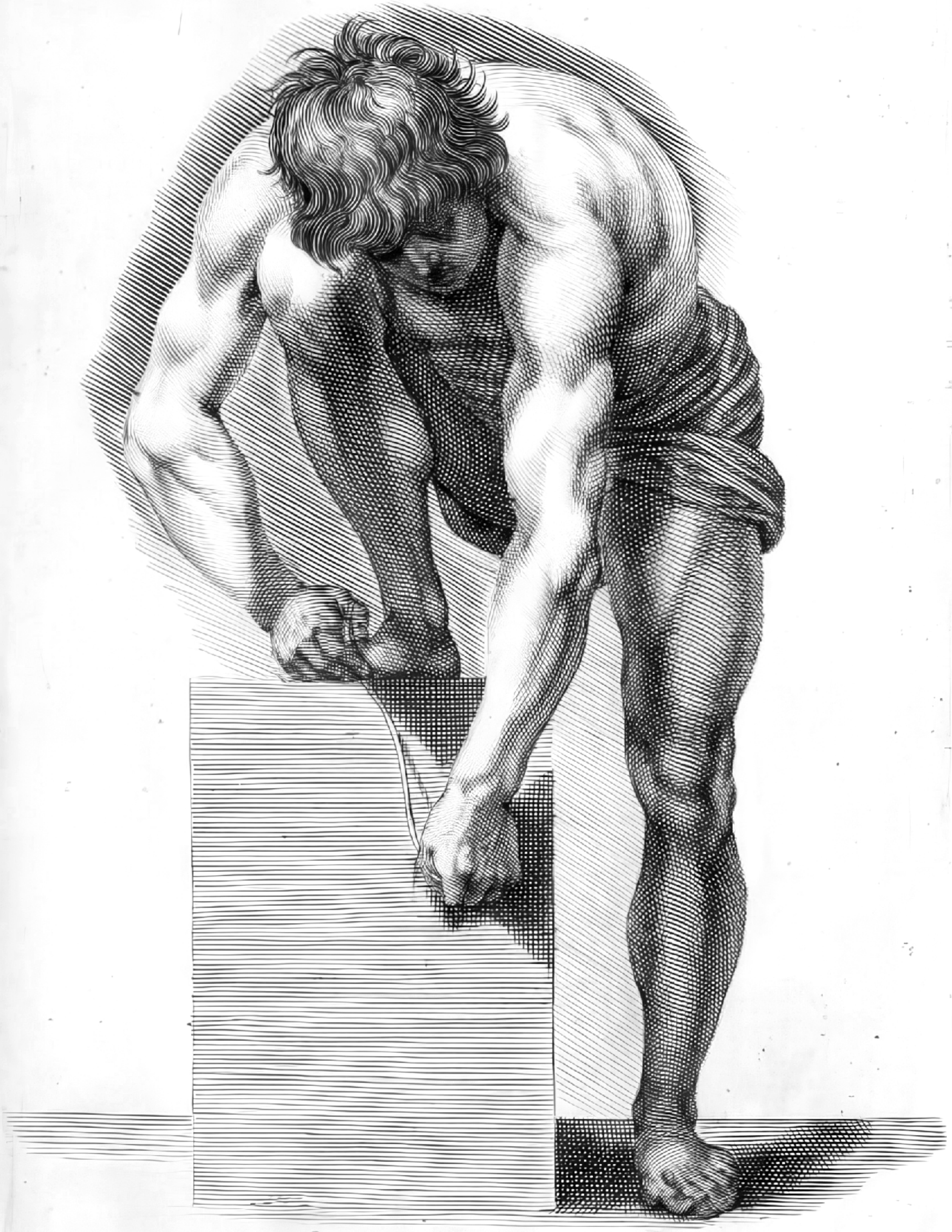


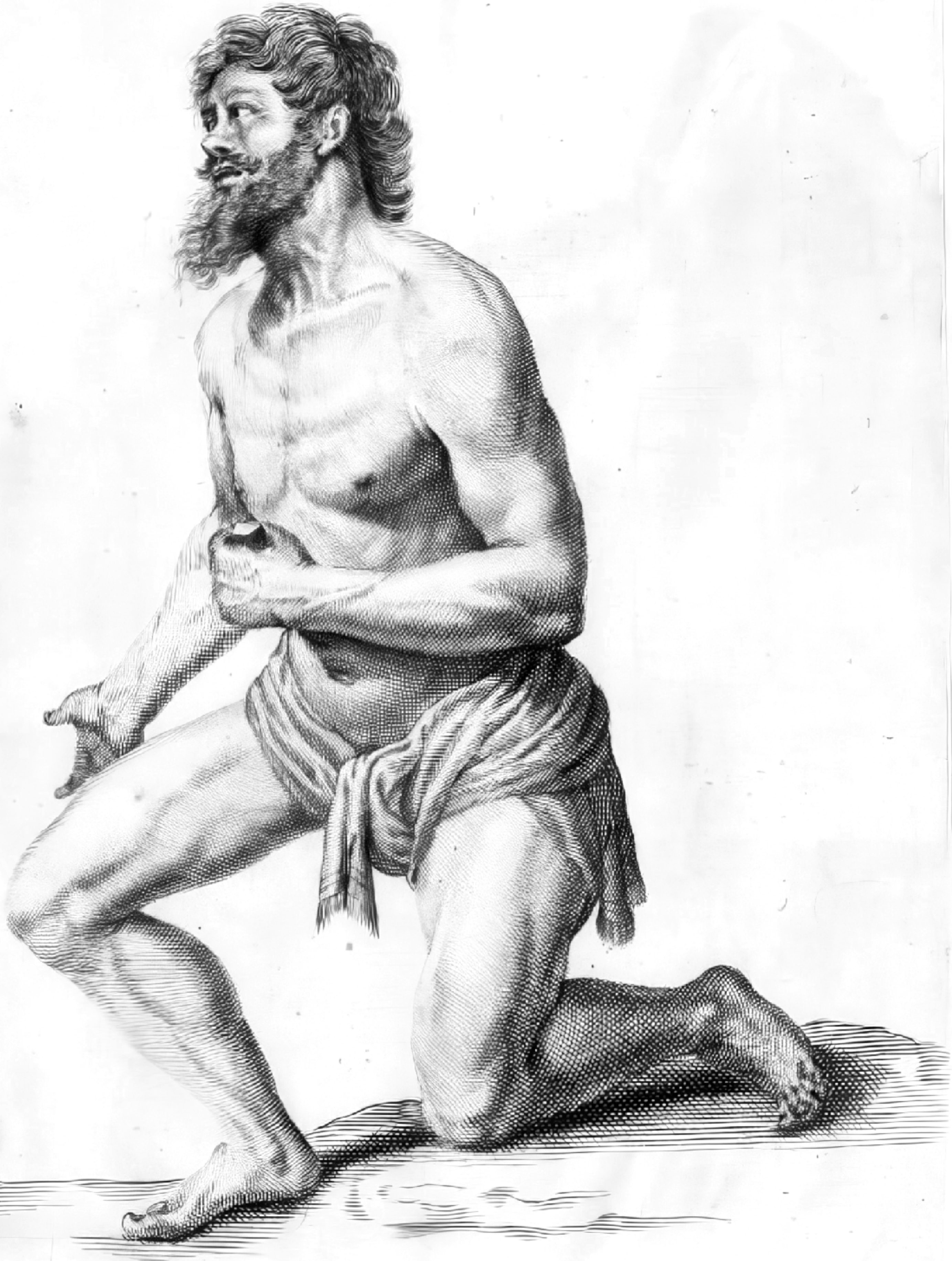


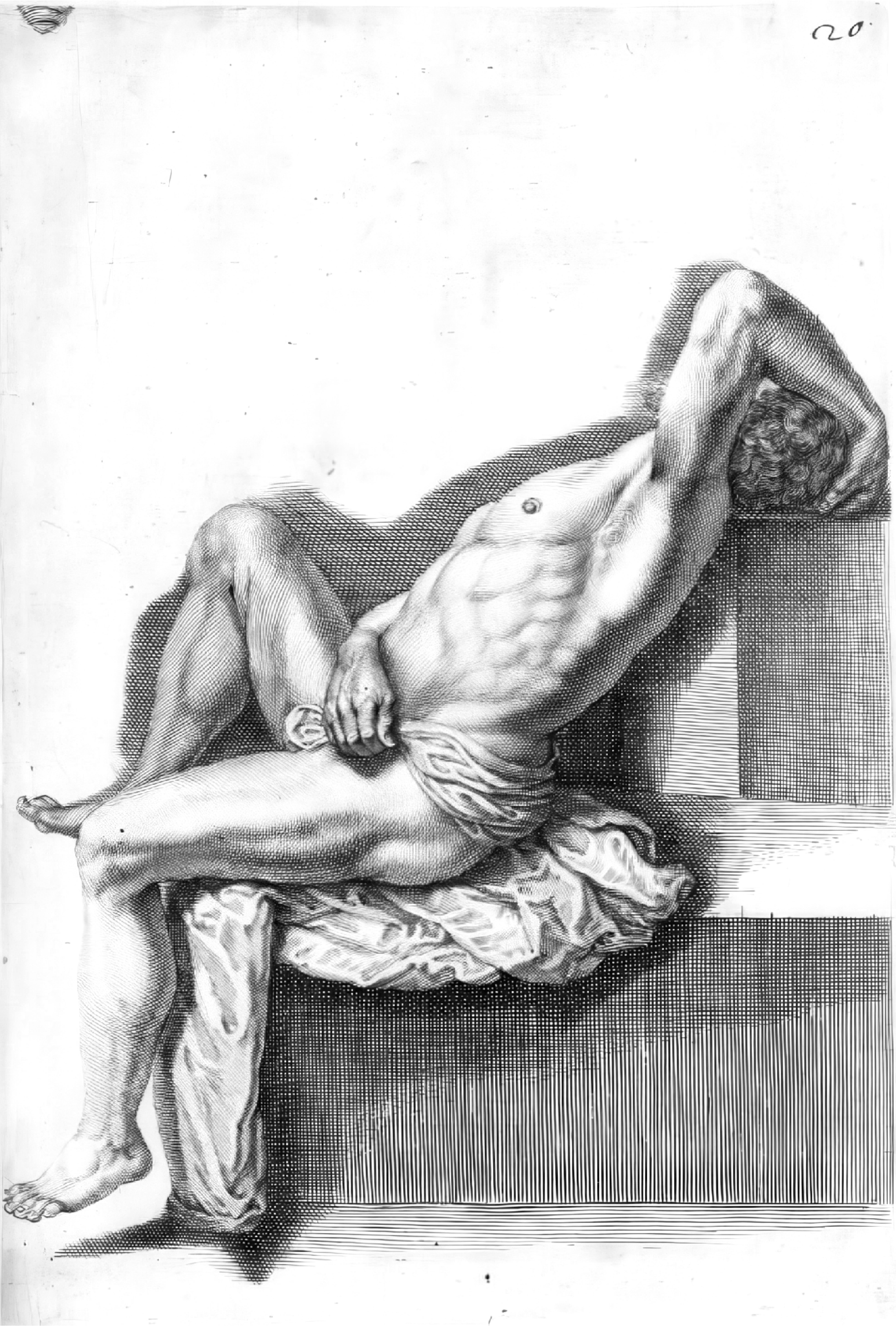


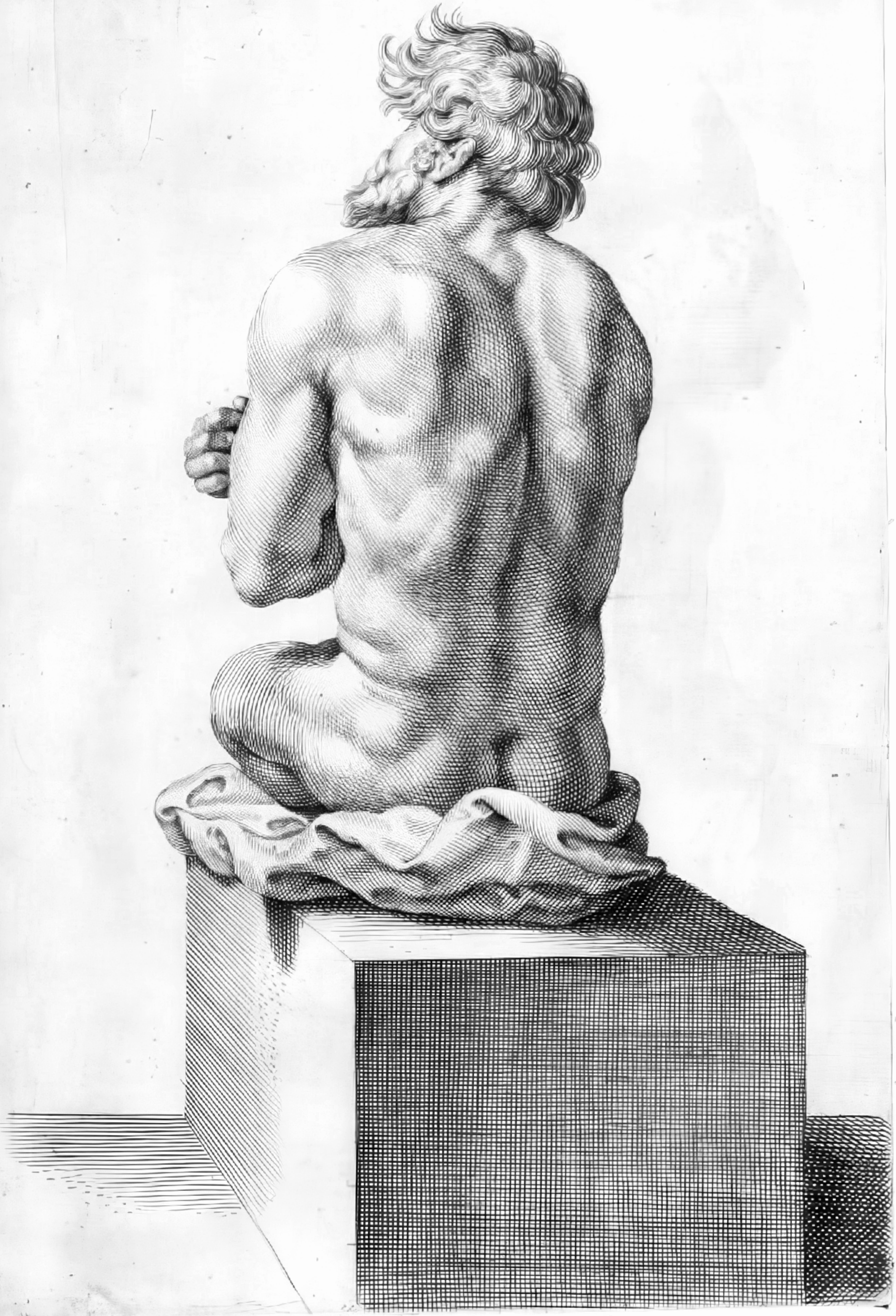




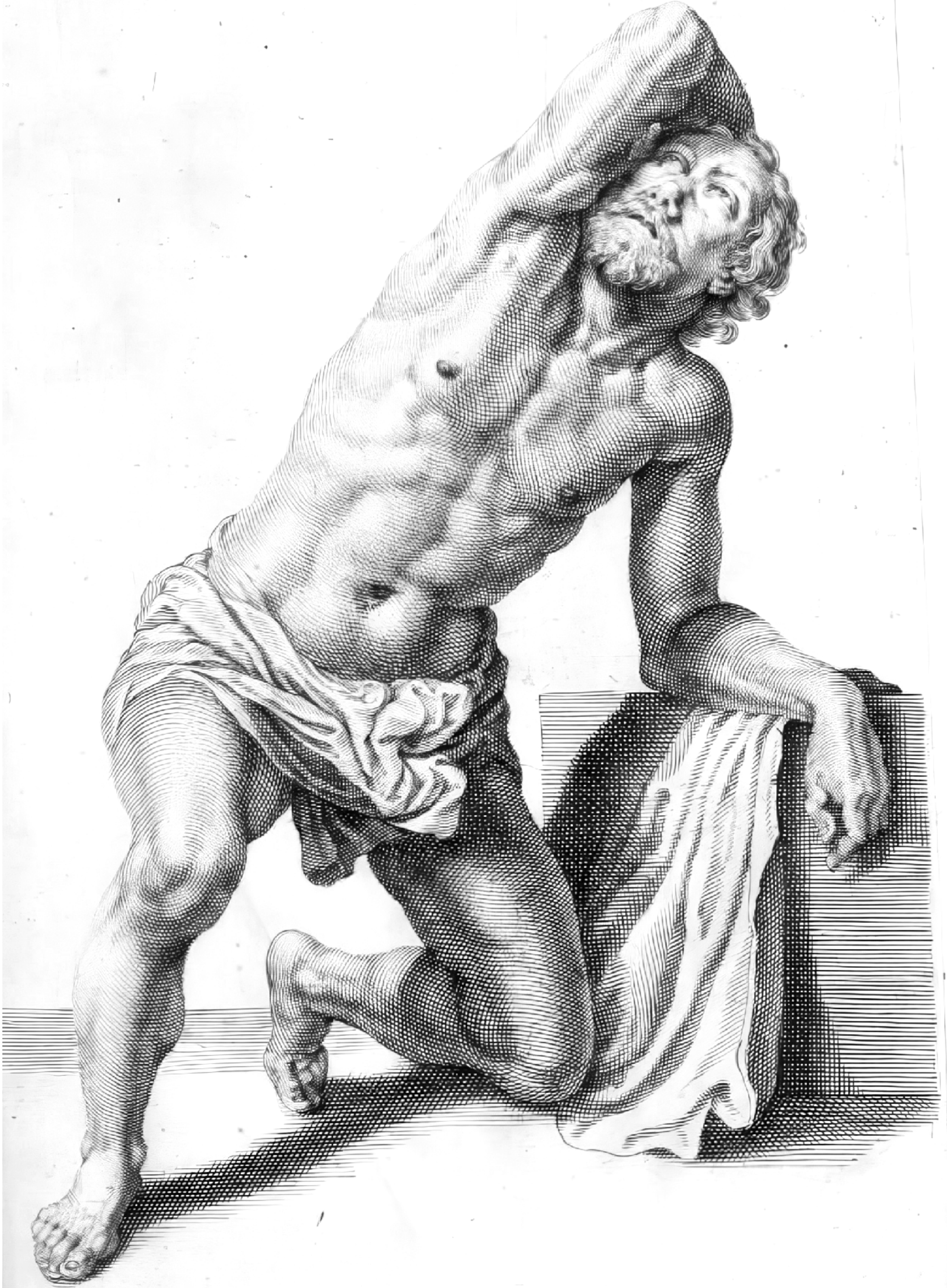


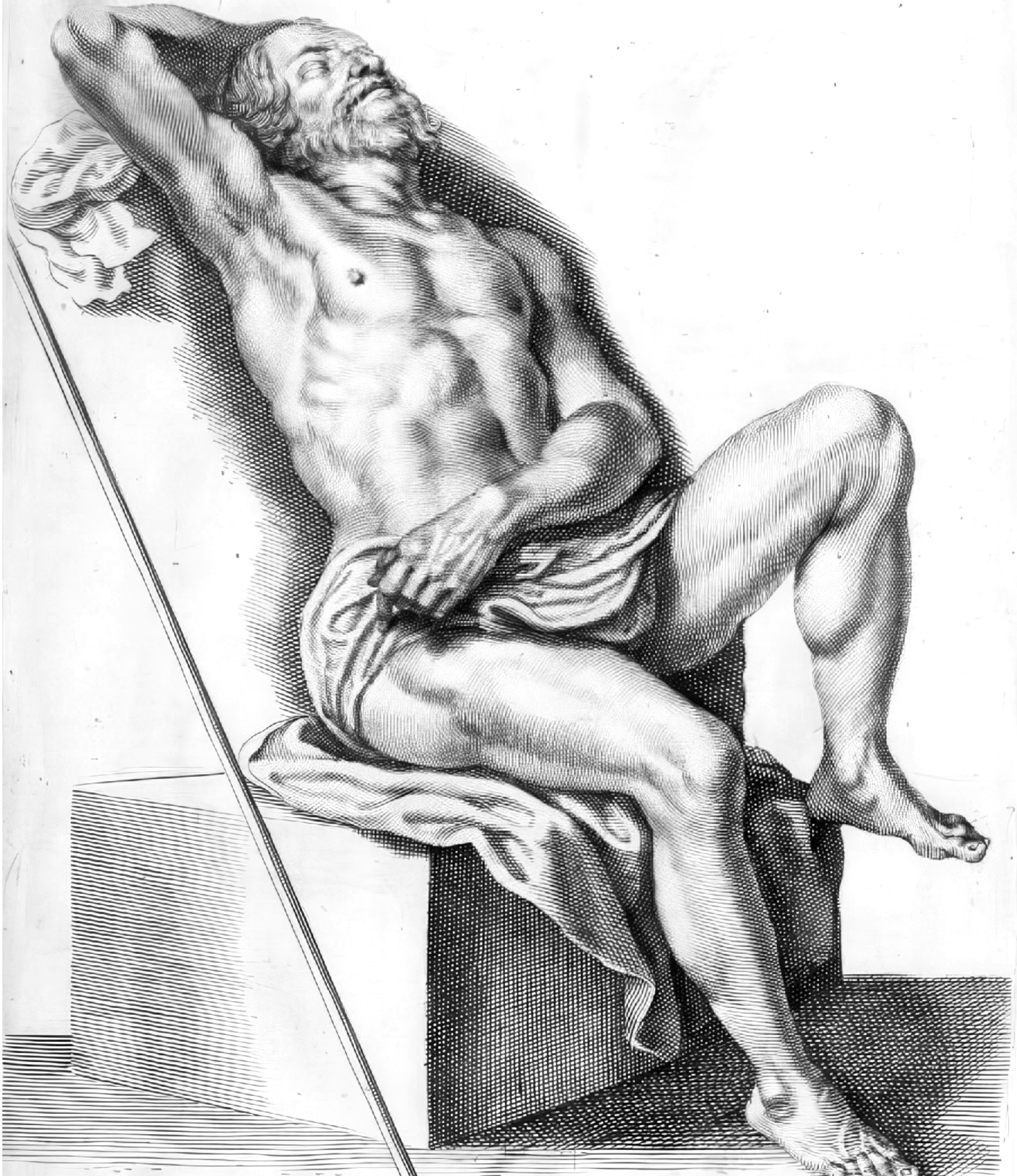


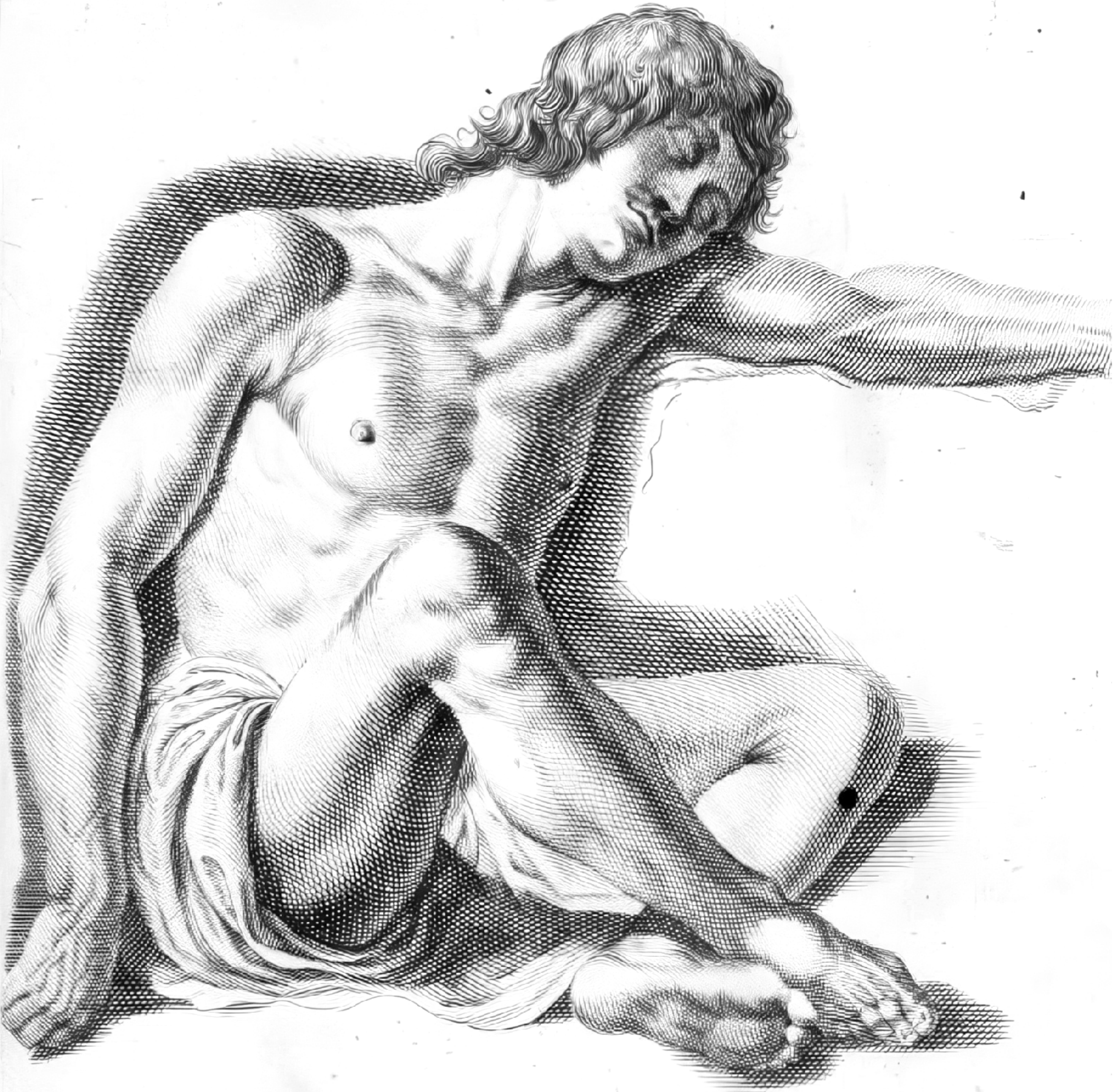


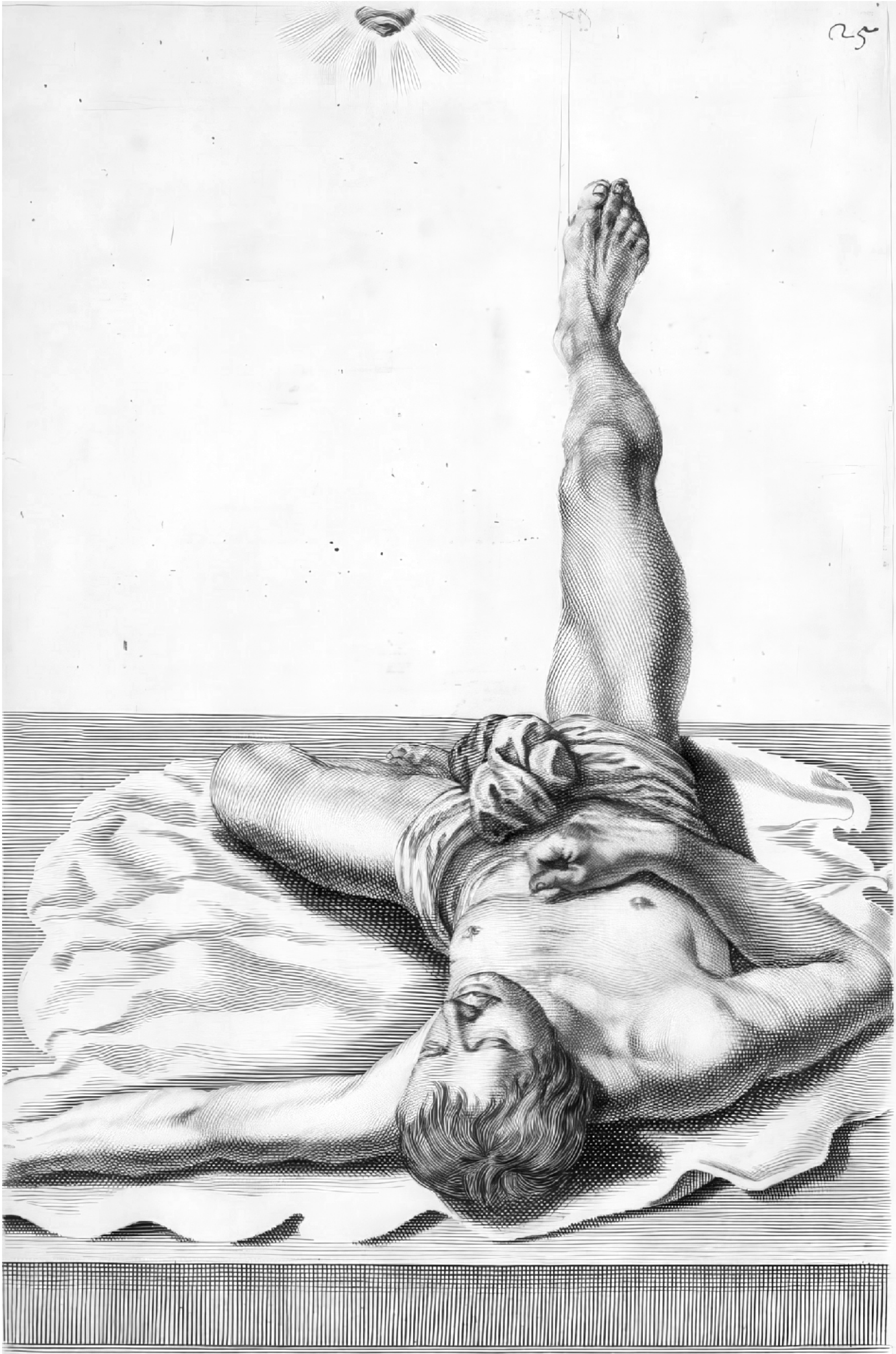


22







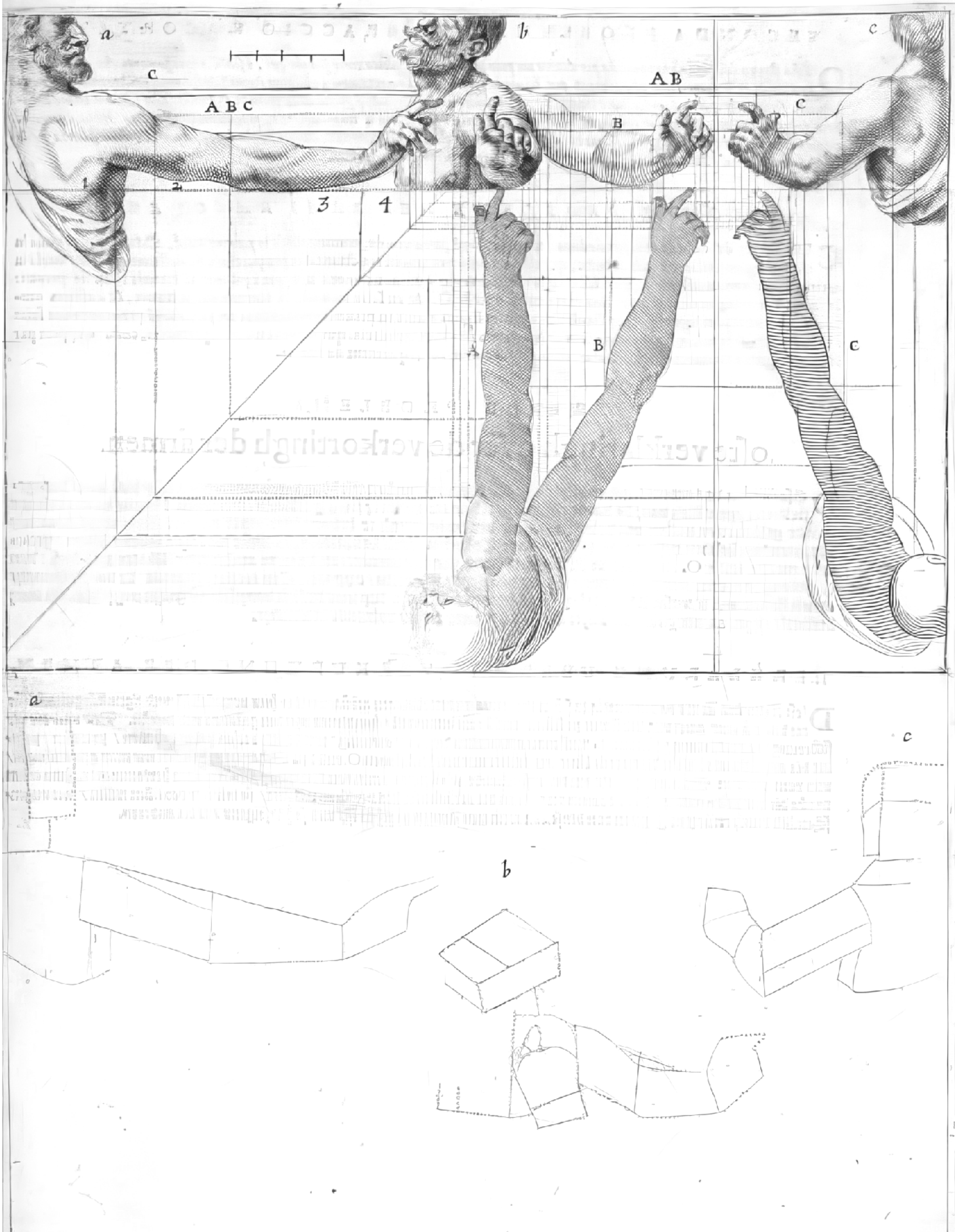


PROBLEM OF FORESHORTENED ARMS

This figure of the arm seen from the inside, slightly bent at the elbow as shown here, is made specifically for the third full-figure illustration viewed from the side, which appears at the beginning when discussing proportions and measurements.

To be certain of the degree of foreshortening, one must follow the same rule we previously used: namely, to draw the perpendicular lines up to the diagonal marked at the extremities of the figure (denoted by *O*), and to create the shadows (contours) in the usual manner.

From these shadows, we then raise the perpendicular lines along with the horizontal lines that proceed from the slightly bent arm. The intersection of these lines gives us the correct foreshortening of the arm that we want to represent, as can be seen in the foreshortened figures of the said arms. And thus, this same process may be applied accordingly to all figures.


a
b
c
C
ABC
AB
C
B
1
2
3
4
B
C
a
c
b

I

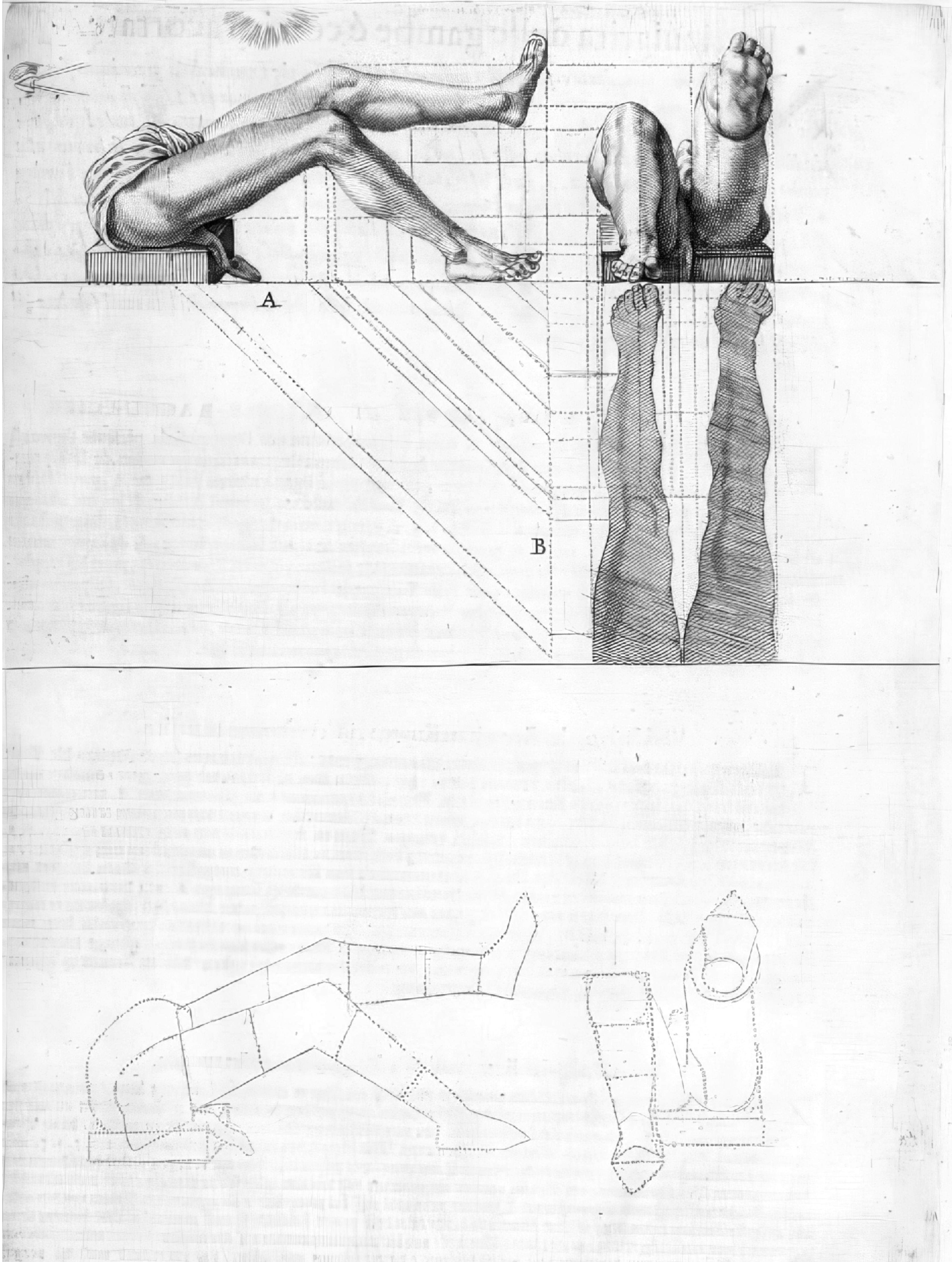
DETAILS ON FORESHORTENED LEGS AND THIGHS

The legs and thighs are foreshortened in the same manner as the previous figures—that is, by drawing perpendicular dotted lines proceeding from the tops of the leg and thigh as seen from the side, where the light falls from above, down to the horizontal line marked *A*.

Then, reflect these same measurements diagonally across to the perpendicular line marked *B*, using the same distances as found along the horizontal line *A*. The terminal points are then placed on the perpendicular line *B*.

From those points, draw horizontal dotted lines to obtain the shadow (or projection) of the initial figure as seen from the side where the light source is placed above. Throughout, one must observe the proper proportions and the correct measurement of their thicknesses.

Next, draw vertical lines upward from the foreshortened figure of the legs and thighs, above the horizontal line marked *A*. The intersections between these upward lines and the dotted horizontal lines proceeding from the initial side-view figure (where the light source is placed) allow us to construct the foreshortened figure of the legs and thighs, by means of the shadow (projection) of the original figure.



III

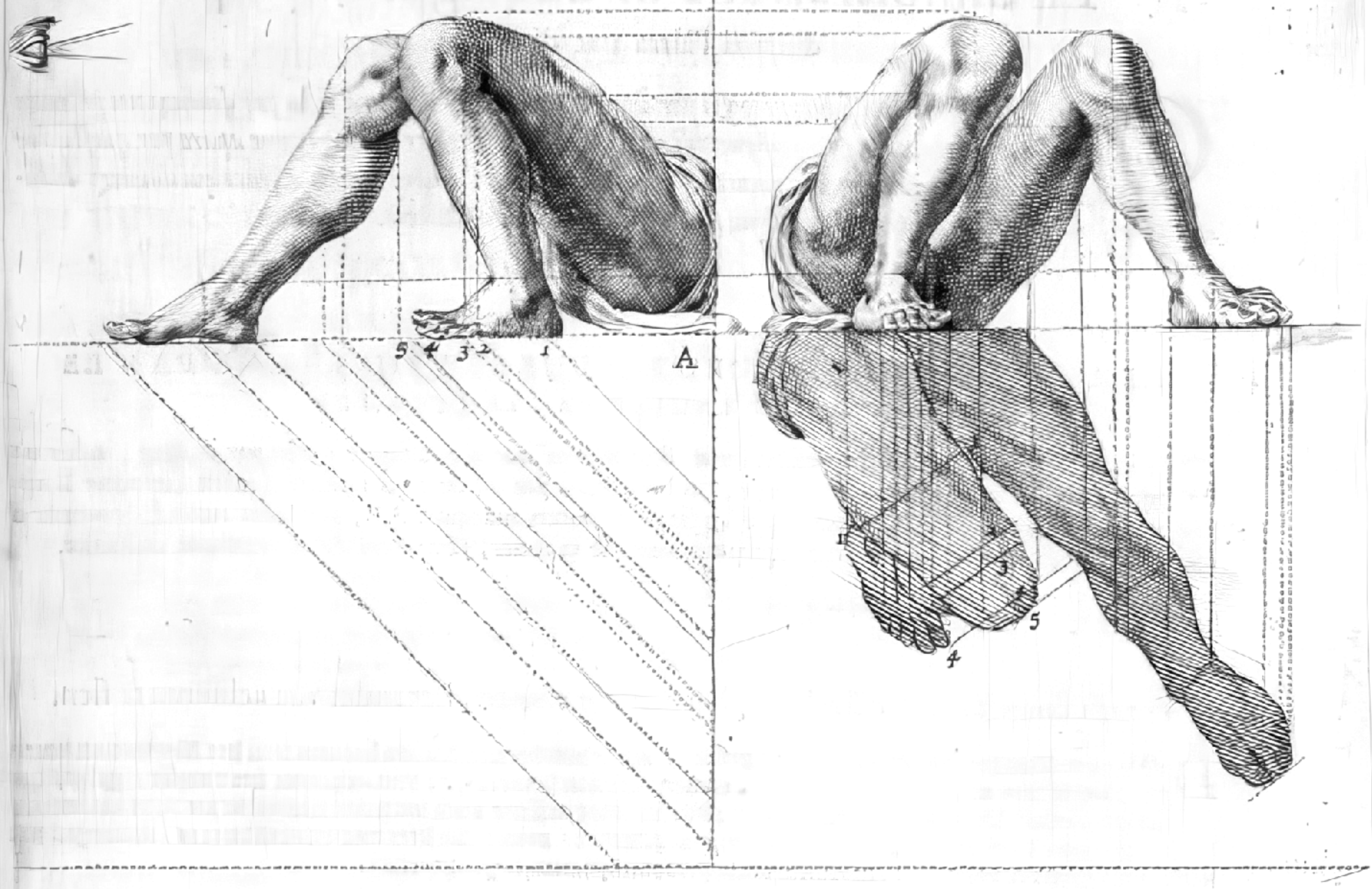
PARTICULARITIES OF FORESHORTENED LEGS AND THIGHS

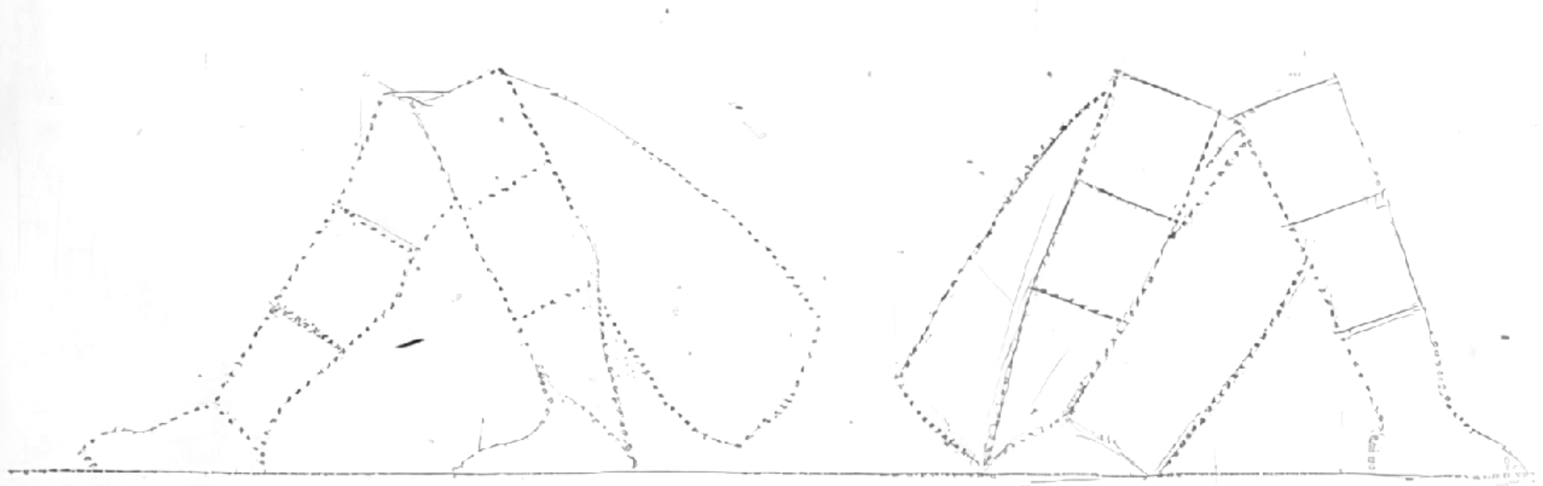
Between the previous figure and the present one, the only difference is that the shadow of the present figure is tilted diagonally, as shown by the *diagonal line* crossing through the middle of the shadow. On this diagonal line are marked the measurements, corresponding to those on the horizontal line marked *A*, which proceed perpendicularly from the figure of the legs and thighs seen from the side (where the light source falls).

The measurements used for the bent leg and thigh, folded back against the body (marked 1, 2, 3, 4, 5), must be projected perpendicularly from the diagonal where the shadow lies. These lines (also marked 1, 2, 3, 4, 5) help construct the shadow of the said bent leg.

For the other, extended leg, take the measurements from the first figure along the horizontal line *A*, and apply them onto the diagonal line on the opposite side to construct the shadow of the extended leg.

Once these shadows are drawn (observing their correct thicknesses), one must draw upward perpendicular lines from the foreshortened figure above the shadow. These lines should intersect with the horizontal lines drawn from the first side-view figure (where the light source falls). The rest is done following the same rule as the previous method.


5
4
3
2
1
A
1
3
5
4

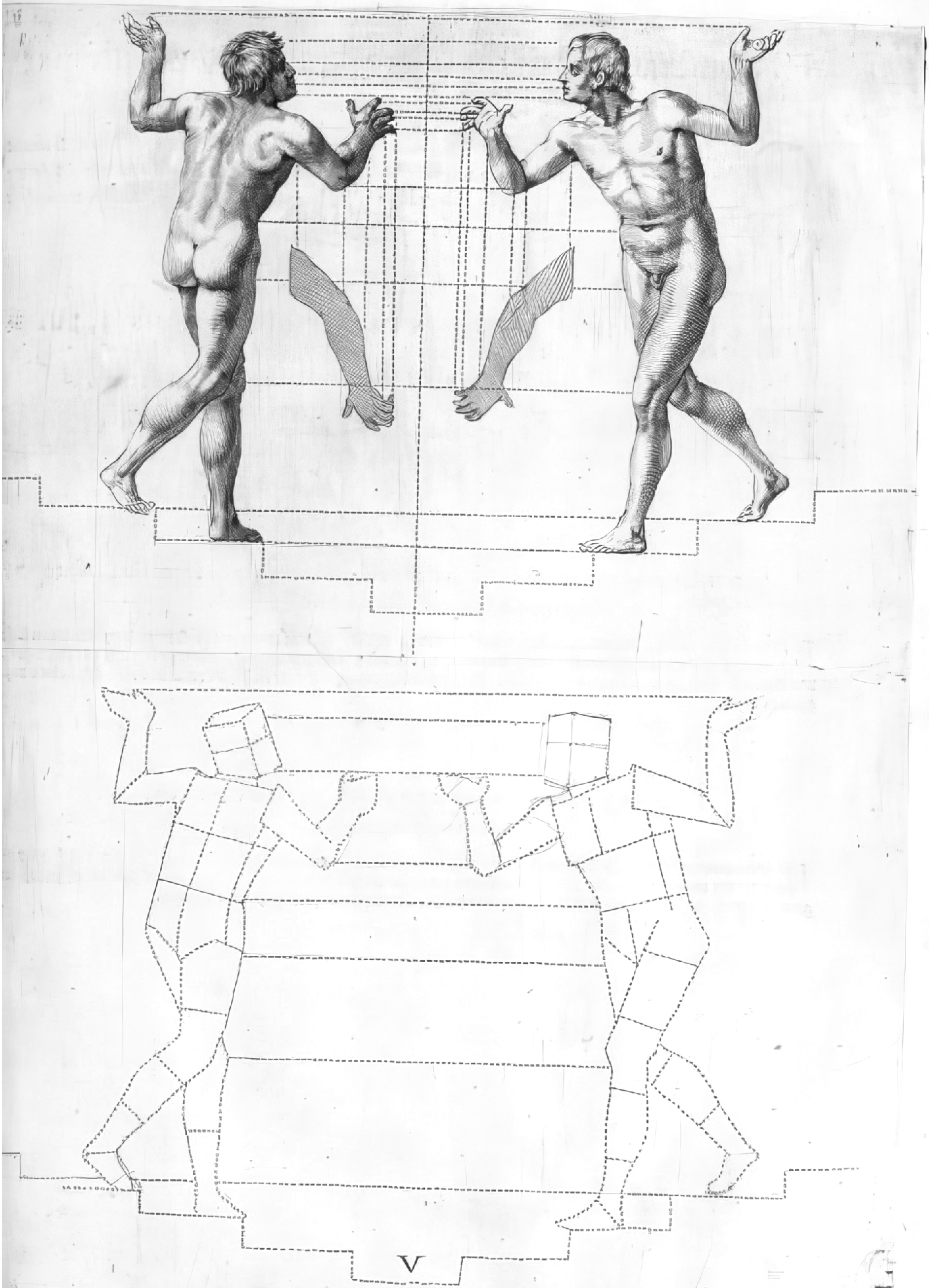


IV

Problem 5 Demonstration of Two Figures, One Seen from the Front and the Other from the Back.

Two figures are presented here to demonstrate that, from a figure seen from the front, we can construct the view of its back; or conversely, from a figure seen from behind, we can create the view from the front (as is shown in these figures).

Here, the foreshortened arms are indicated and marked AB, along with their shadows (as previously explained), in such a way that to achieve the proper foreshortening, one must follow the standard method.



V

First Problem of Foreshortened Arms

The outstretched arm, drawn at its full length with its proportions and measurements aligned along the level line marked A–B–C, as seen from the side, gives us the foreshortening in the present figure in three forms:

- The first, seen entirely from the front, is marked A.
- The second, seen slightly from the side, shows the inside of the arm, and is marked B.
- The third, showing the outside of the arm, is marked C.

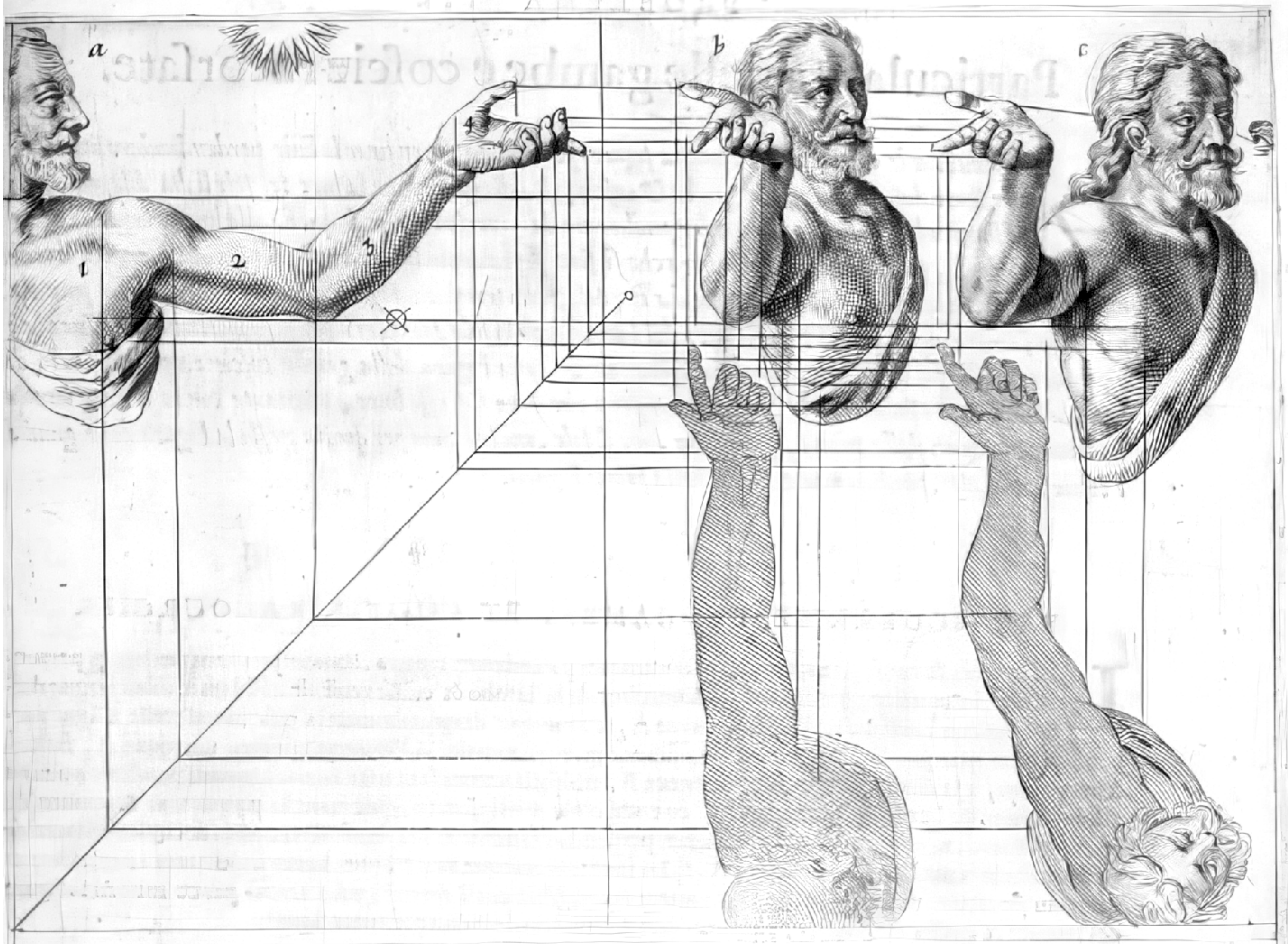
Method:

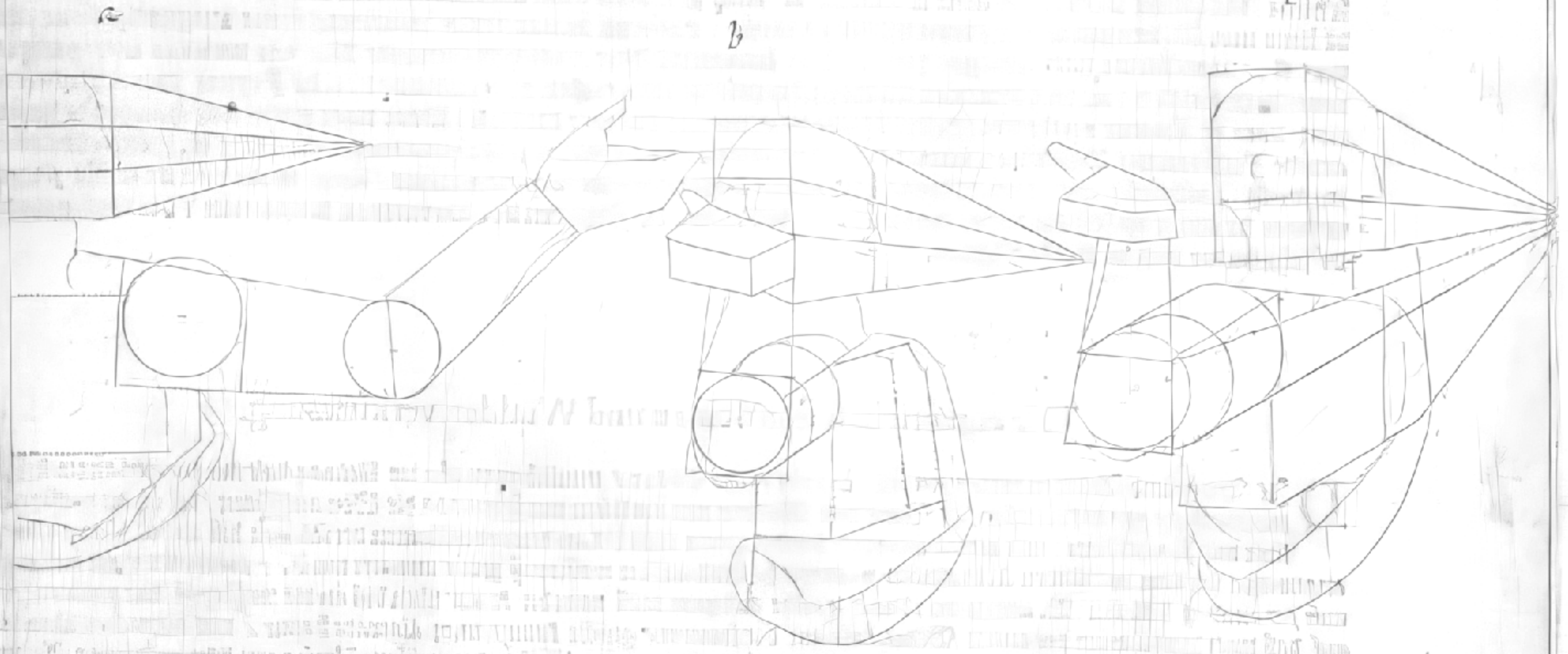
To obtain these, one must:

1. Draw perpendicular lines from the fully extended arm down to the diagonal line, marked at both ends with O.
2. Reflect these lines orthogonally from the level line (A–B–C) to obtain the shadows (or silhouettes) of the arm.
3. Important consideration: Treat the light source as if the sun were directly overhead, casting shadows straight down onto the diagonal line.
4. Use this shadow to trace the contour of the arm.
5. From these shadows, draw vertical lines upward, and at the same time, draw level lines from the original arm view.
6. The intersections of these vertical and level lines will give you the foreshortened arms we are seeking.

Thus, the shadow marked A gives us the arm foreshortened head-on, also marked A.
The shadow marked B, which is slightly angled, gives us the foreshortened arm seen from the outside, marked C.
This is viewed through the eye point marked C, while the others are seen through the eye points A and B, respectively.

In summary, by intersecting vertical lines rising from the shadows with horizontal lines from the long view of the arm, the correctly foreshortened versions are constructed, as can be seen in the resulting diagrams.

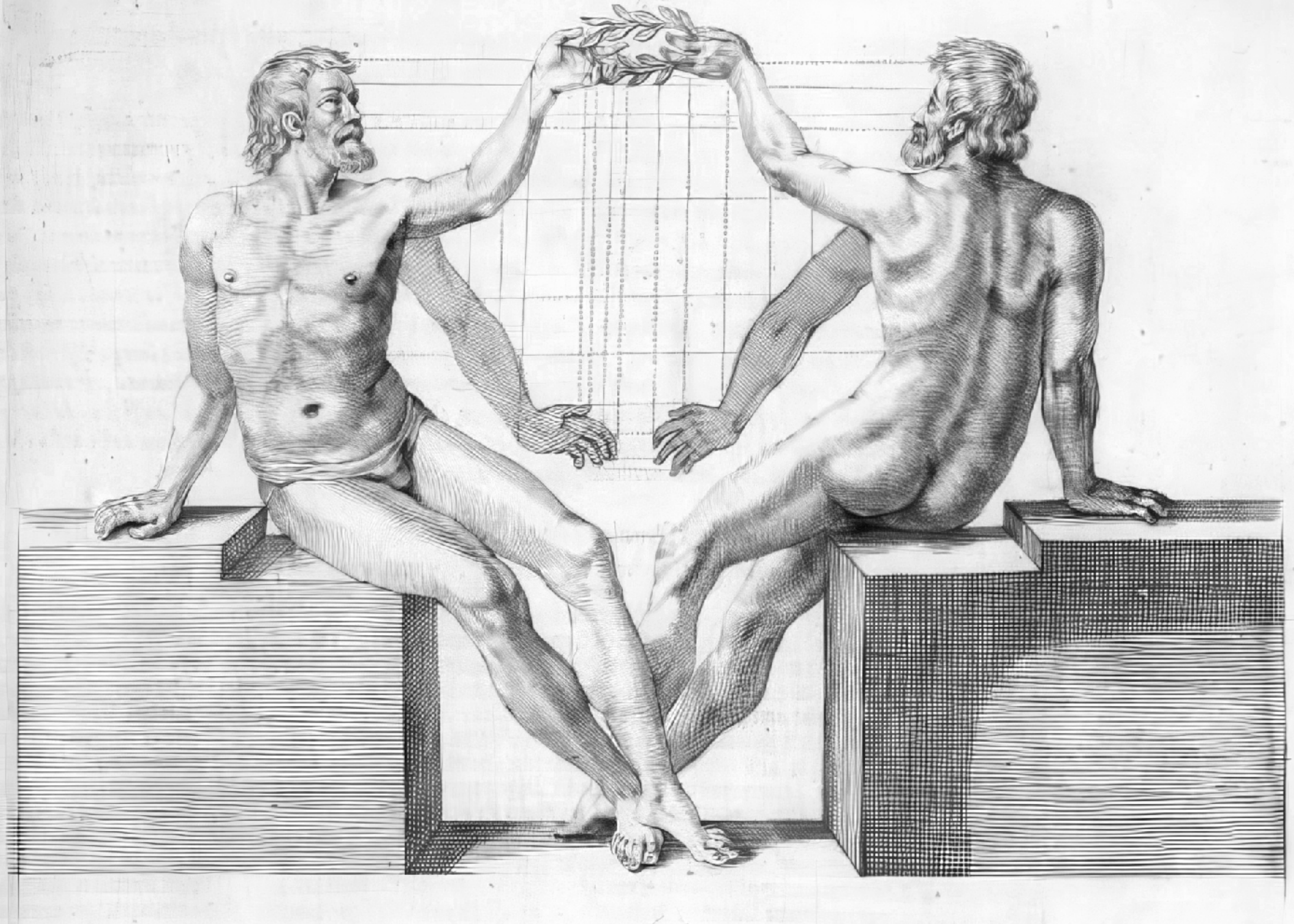

a
b
c
1
2
3
4

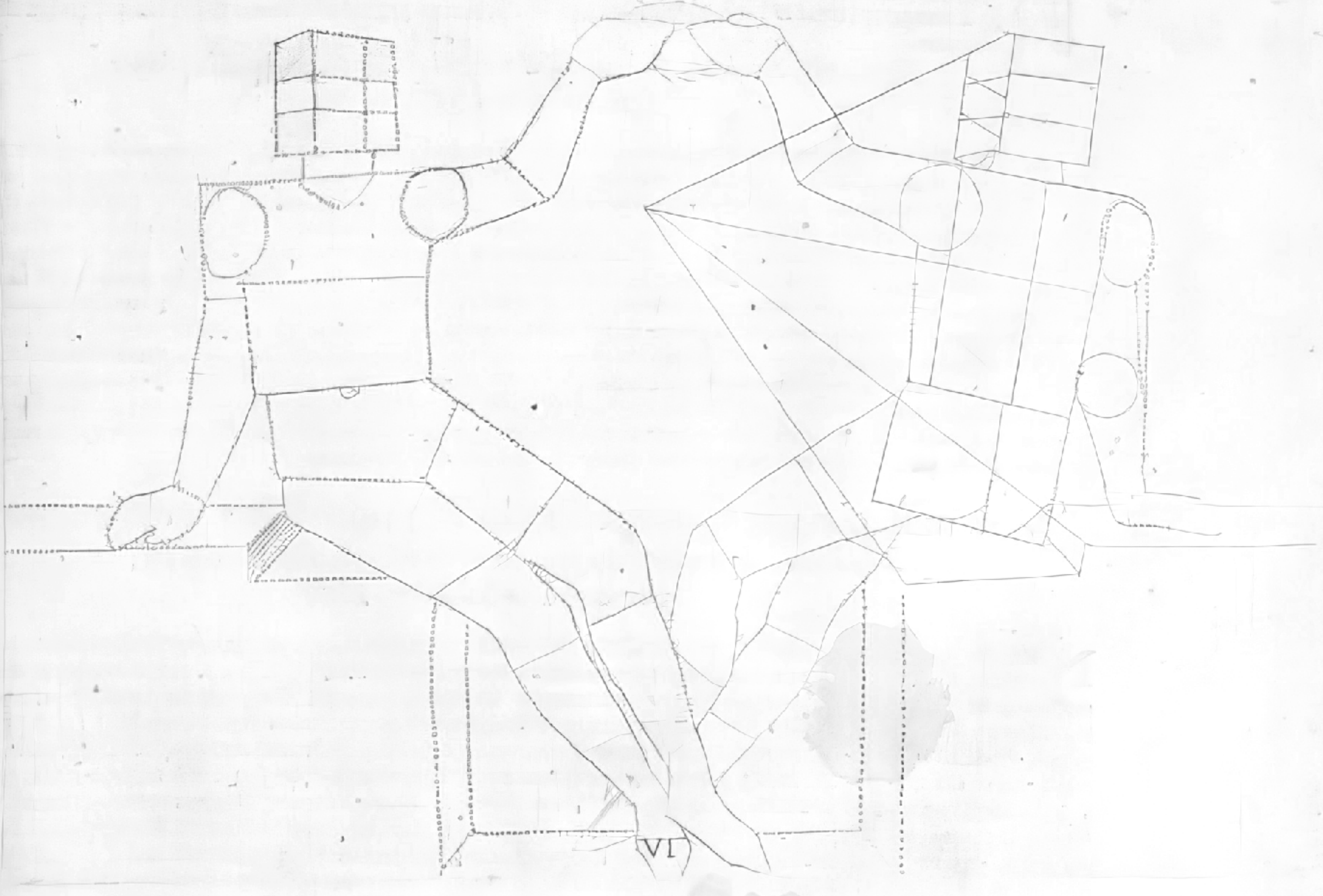

a
b

Demonstration of Two Other Seated Figures — One Seen from the Front, the Other from the Back — Both Drawn from the Same Construction

In these two seated figures, we are shown that from the construction lines (the line) of one figure, the opposite view can be created. That is, by using the same method, one can construct the reverse side of a pose.

This follows exactly the same rule as previously demonstrated. The foreshortening of the arms is executed in the same manner here, so that there is no difference between the previous standing figures and these seated ones in terms of method.




VI

Full Figure of the Human Body, Foreshortened from the Front (Seen from the Sole of the Feet with the Torso Above)

Having observed the proportions and measurements of the figure seen from the side — fully extended and marked along the horizontal level line 1, 2, 3, 4, 5, 6, 7, 8 — we take that projection and draw diagonal lines parallel to it, continuing until they intersect with the perpendicular line rising from the extremities of the toes of the same figure.

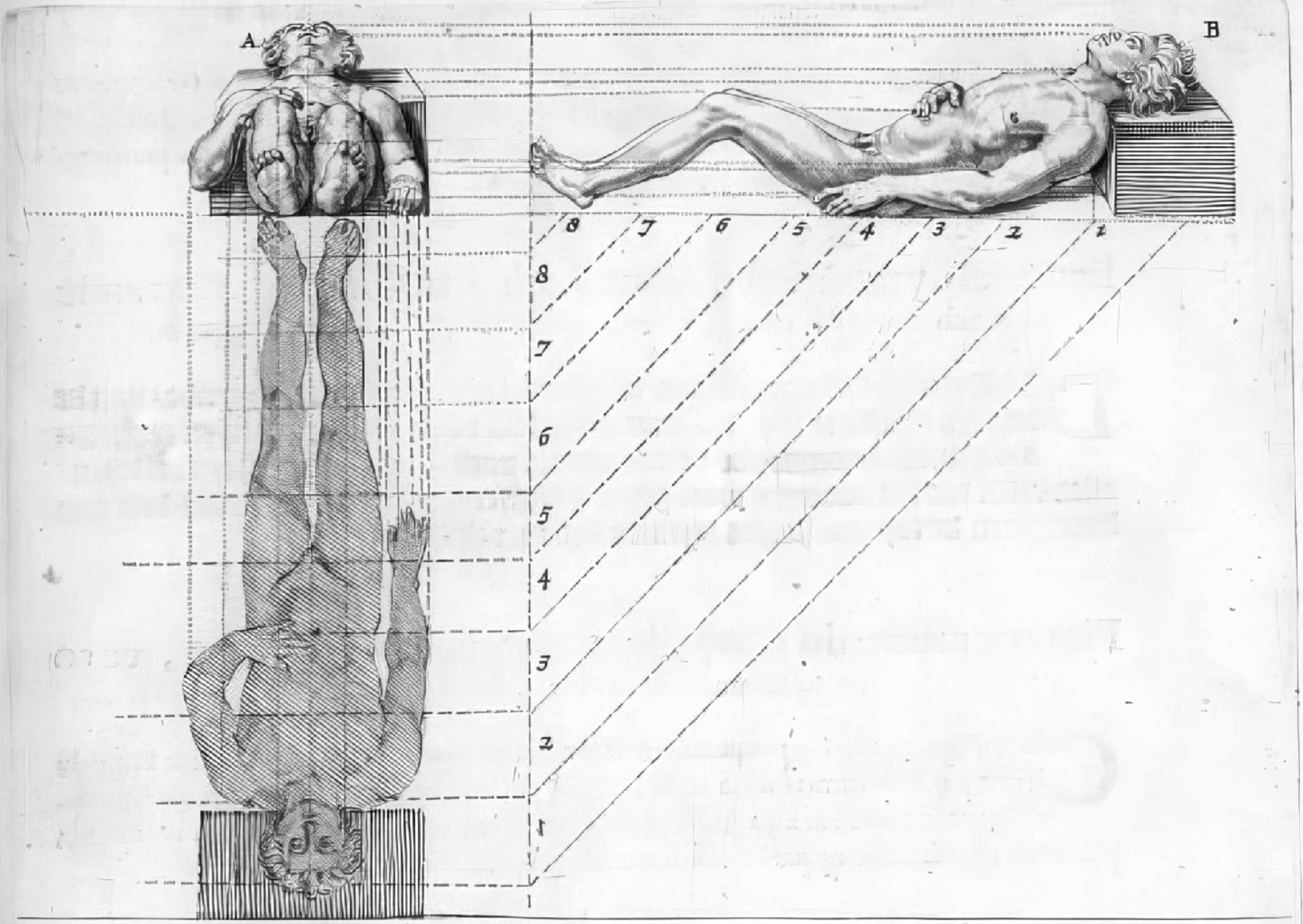
Place the key measurements (1, 2, 3, etc.) on this vertical line. Then from each of these points, draw horizontal lines parallel to the original level line to form the shadow (silhouette) of the foreshortened figure.

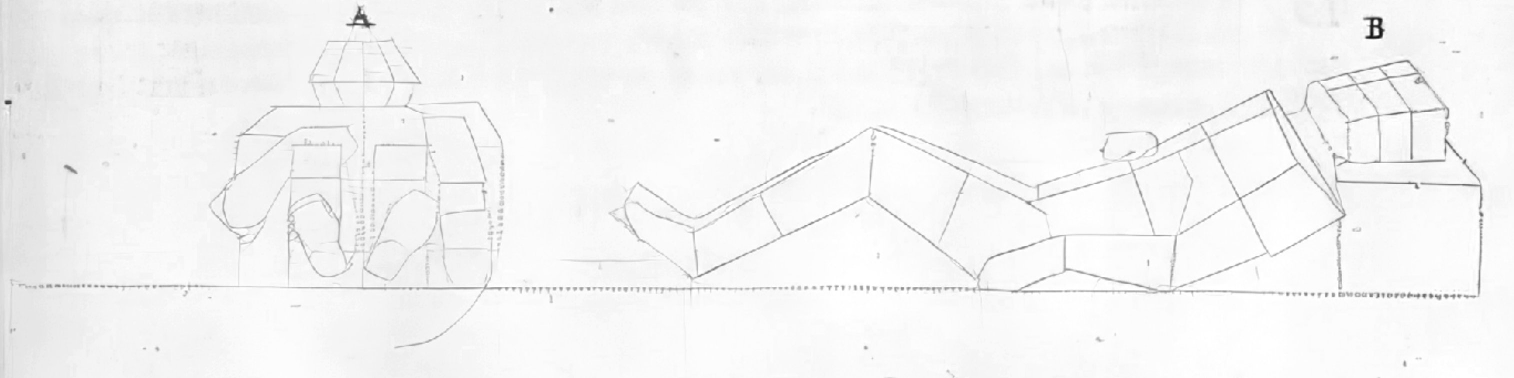
At each placement — 1 through 8 — observe what that section represents based on the first figure seen from the side. However, always bear in mind that this shadow (or silhouette) is viewed entirely from the front, as if the sun were shining directly down upon the figure from above. This is evident in the resulting image: a front-view foreshortened figure, with its width, proportions, and measurements all carefully maintained.

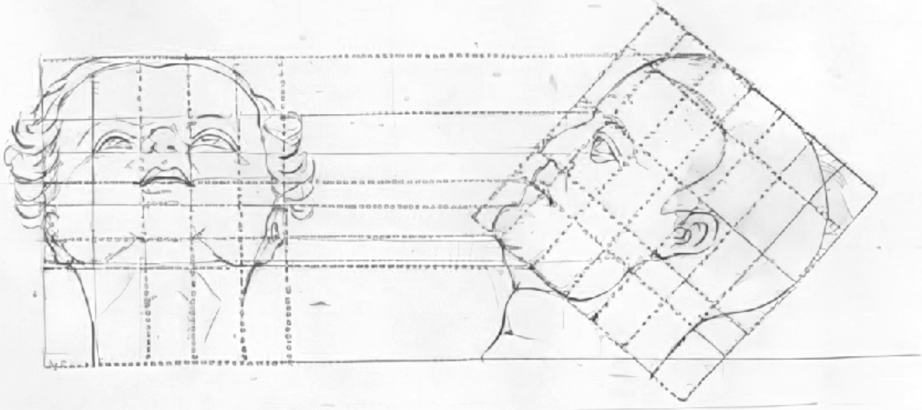
To derive the foreshortened figure, draw vertical lines upwards from the foreshortened shadow until they intersect with the horizontal level lines coming from the original side-view figure. This produces the complete foreshortened construction — seen straight from above and perfectly vertical, as if looking down from the head toward the feet.

The small measure at the base, divided into four equal parts, represents the measurement of the head, which must necessarily appear smaller than in the side-view figure, due to the effects of perspective.

This is how to construct a complete figure in foreshortening, preserving proportional accuracy throughout.

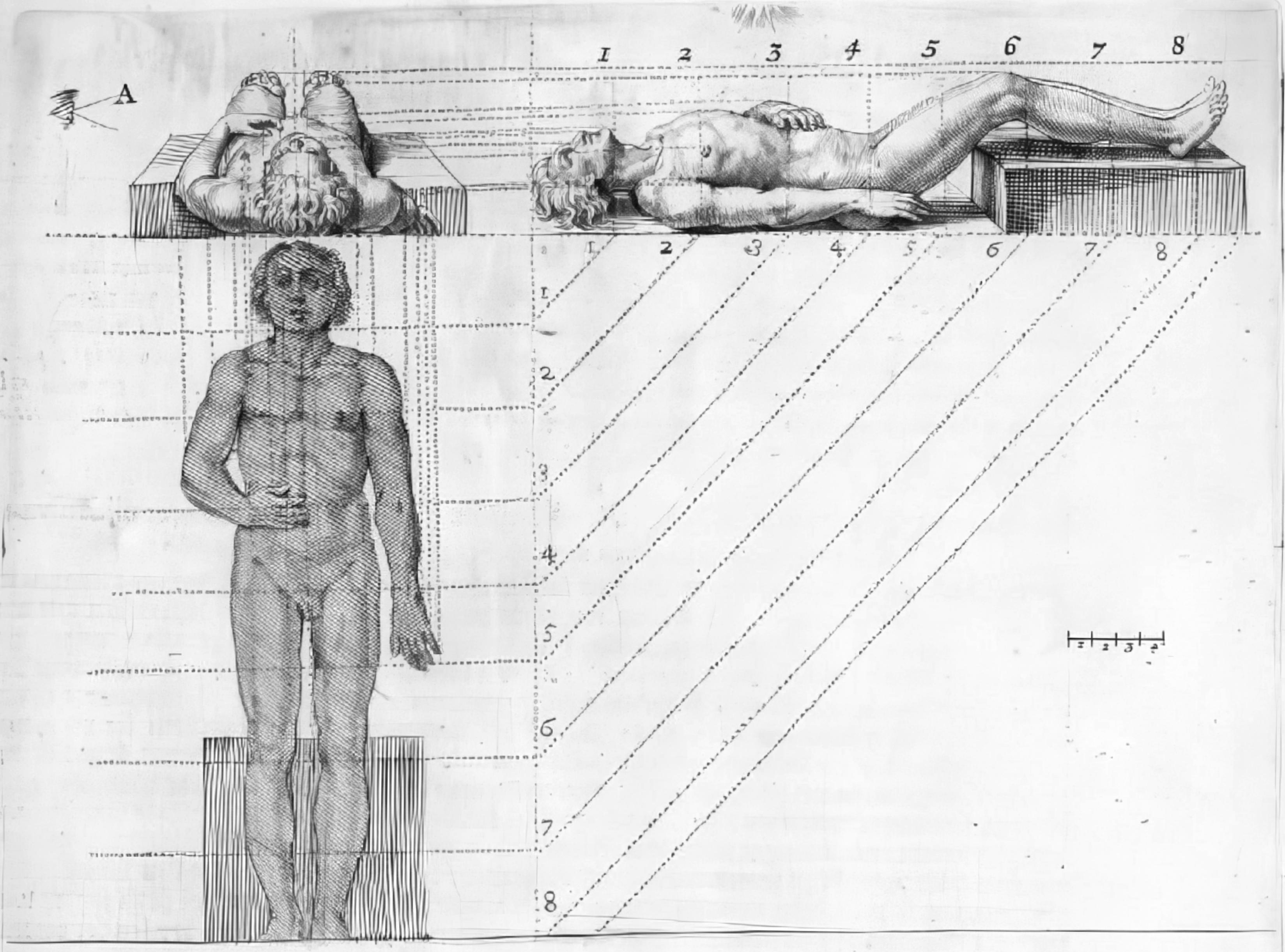

A
B
8
7
6
5
4
3
2
1
8
7
6
5
4
3
2
1

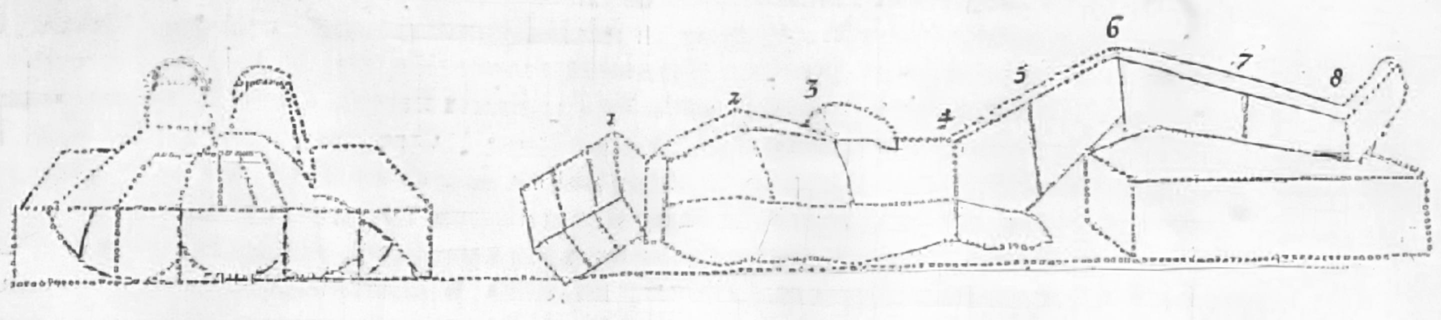

A
B

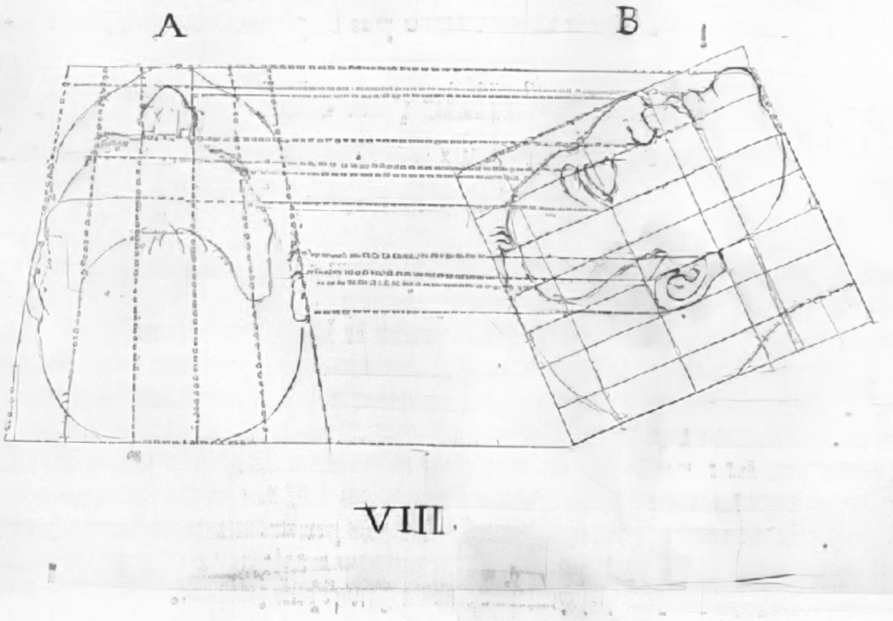


Entire Figure of the Human Body Foreshortened from the Front, Viewed from the Top of the Head, with the Abdomen Below

This figure, along with its proportions and measurements, is constructed according to the same reasoning and rules as the preceding one. There is no difference except that the previous figure is seen from the soles of the feet, while this one is viewed from above — from the top of the head — as can be observed.


A
1
2
3
4
5
6
7
8
1
2
3
4
5
6
7
8
1
2
3
4
5
6
7
8
1
2
3
4





VIII

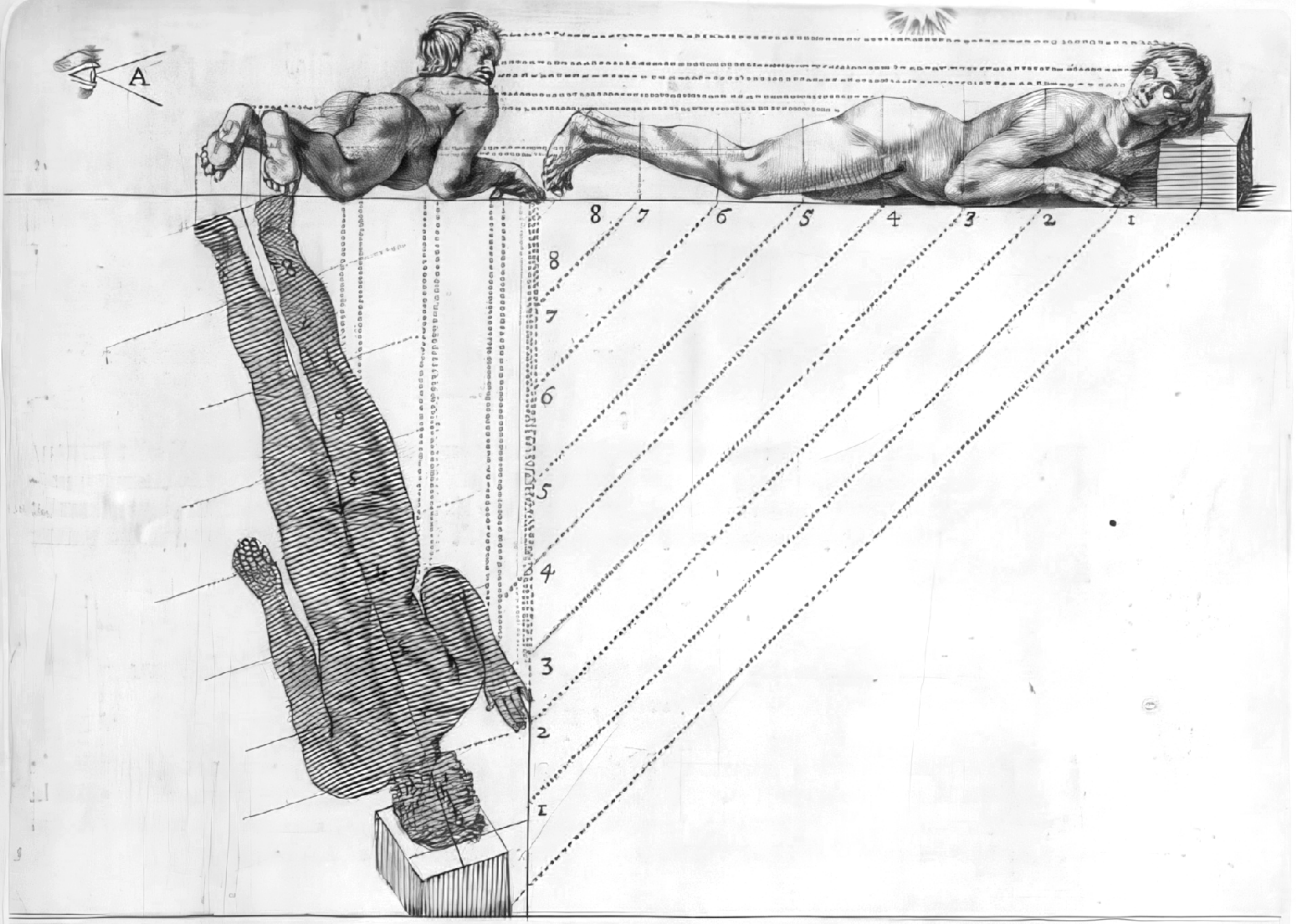
Entire Figure of the Human Body Foreshortened at a Slight Angle, Seen from the Soles of the Feet, with the Back Facing Upward

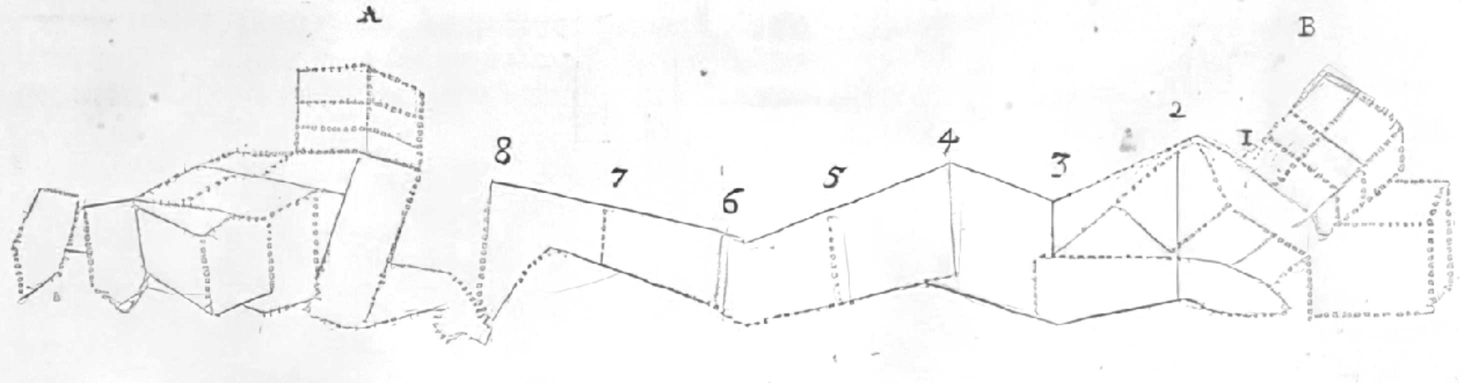
Just as we have shown in the previous figures, so too must we apply a similar method here. Having first constructed the figure lying flat on its side, with the back facing upward, we must likewise observe its proportions and measurements, as shown along the horizontal measurement line marked 1 through 8.

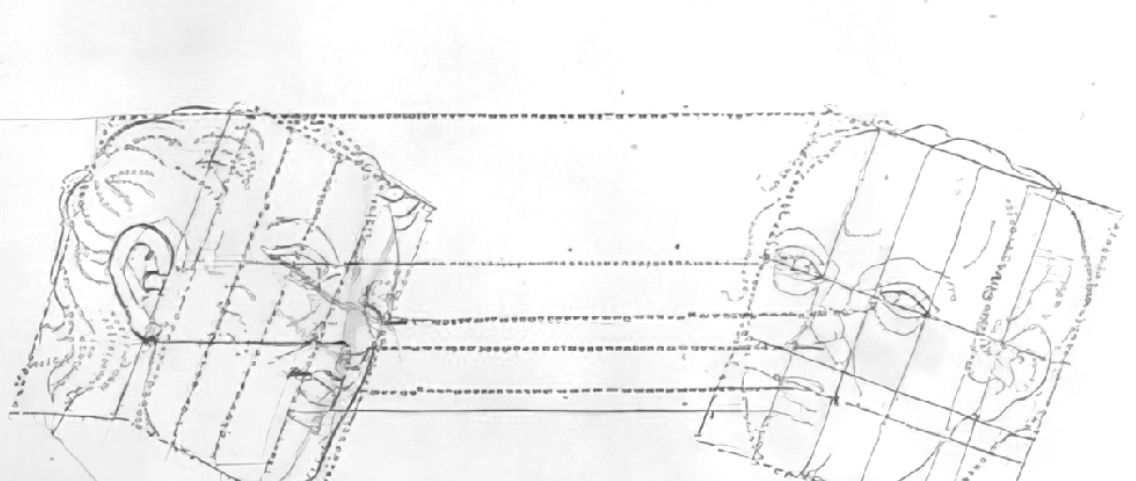
These proportions and measurements must then be transferred diagonally to the vertical line that separates the foreshortened figure from the shadow of the side-view figure.

To construct the shadow figure, draw a slanted line through the middle of the figure and mark along it the same measurements: 1 for the head, 2 for the shoulders, and so on up to 8.

The shadow should be drawn as if the sun were shining directly downward on the back, allowing one to trace the silhouette. Then, perpendicular lines must be drawn upwards from the side-view figure (lying flat and seen from the side), intersecting with the horizontal lines. These intersections yield the foreshortened figure, seen slightly from the side — as demonstrated in this figure, which is viewed from the soles of the feet, with the back facing upward.


A
8
7
6
5
4
3
2
1
8
7
6
5
4
3
2
1

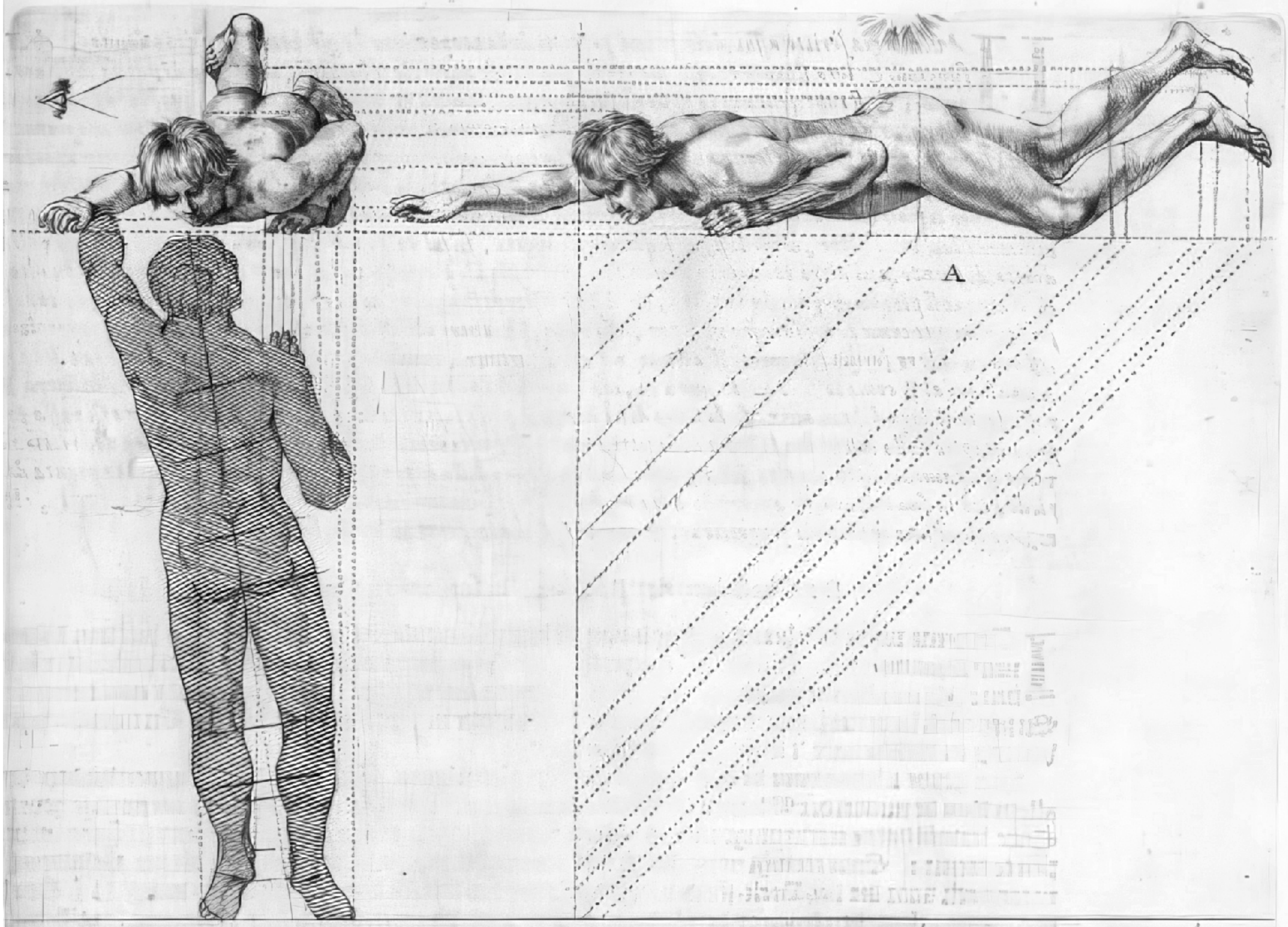

A
B
8
7
6
5
4
3
2
1

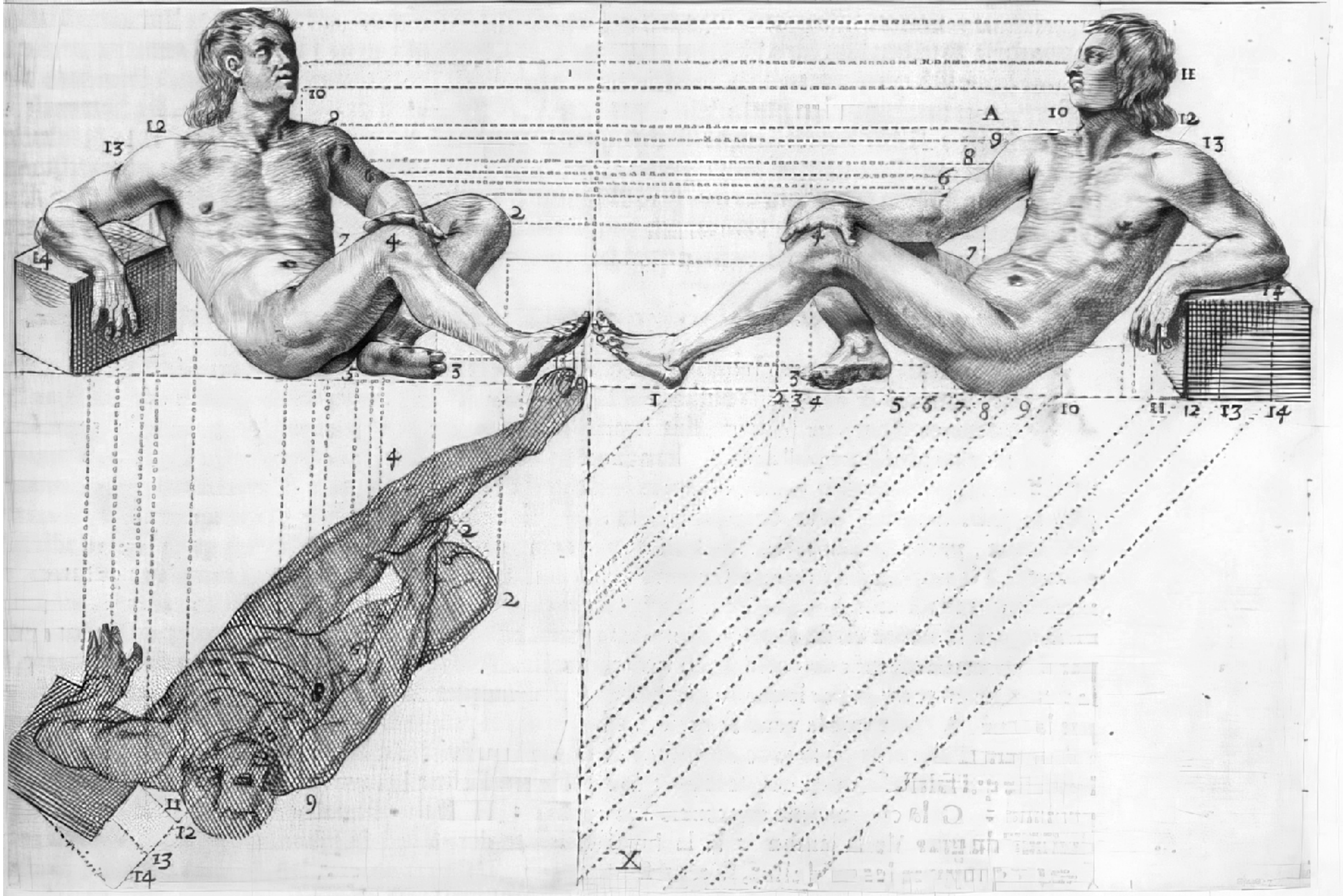


IX

Entire figure of the human body, foreshortened and viewed slightly from the side, from the crown of the head, with the back facing upward.

The previous demonstration serves us also in this foreshortened figure, seen from the crown of the head, without changing anything: for the lines rising perpendicularly from the shadow figure to the horizontal lines of the original figure marked A — their intersections give us the foreshortened figure seen from the top of the head.


A


A
10
9
8
6
4
7
2
3
1
2 3 4
5 6 7 8 9 10
11 12 13 14
12
13
14
X

Representation of Figures, Their Proportions, Measurements, and Foreshortening's in the Form of Blocked Squares

Having already written concerning the initial principles and proportions of men, women, and small children — in their tall, thin, and stout statures — and since living people are not statues but moving bodies, and thus must be represented in various postures and changes of view, as observed by those who study drawing from the model or from life in academies, I have not found a more efficient method for conveying this knowledge to young students than by means of blocks or squares.

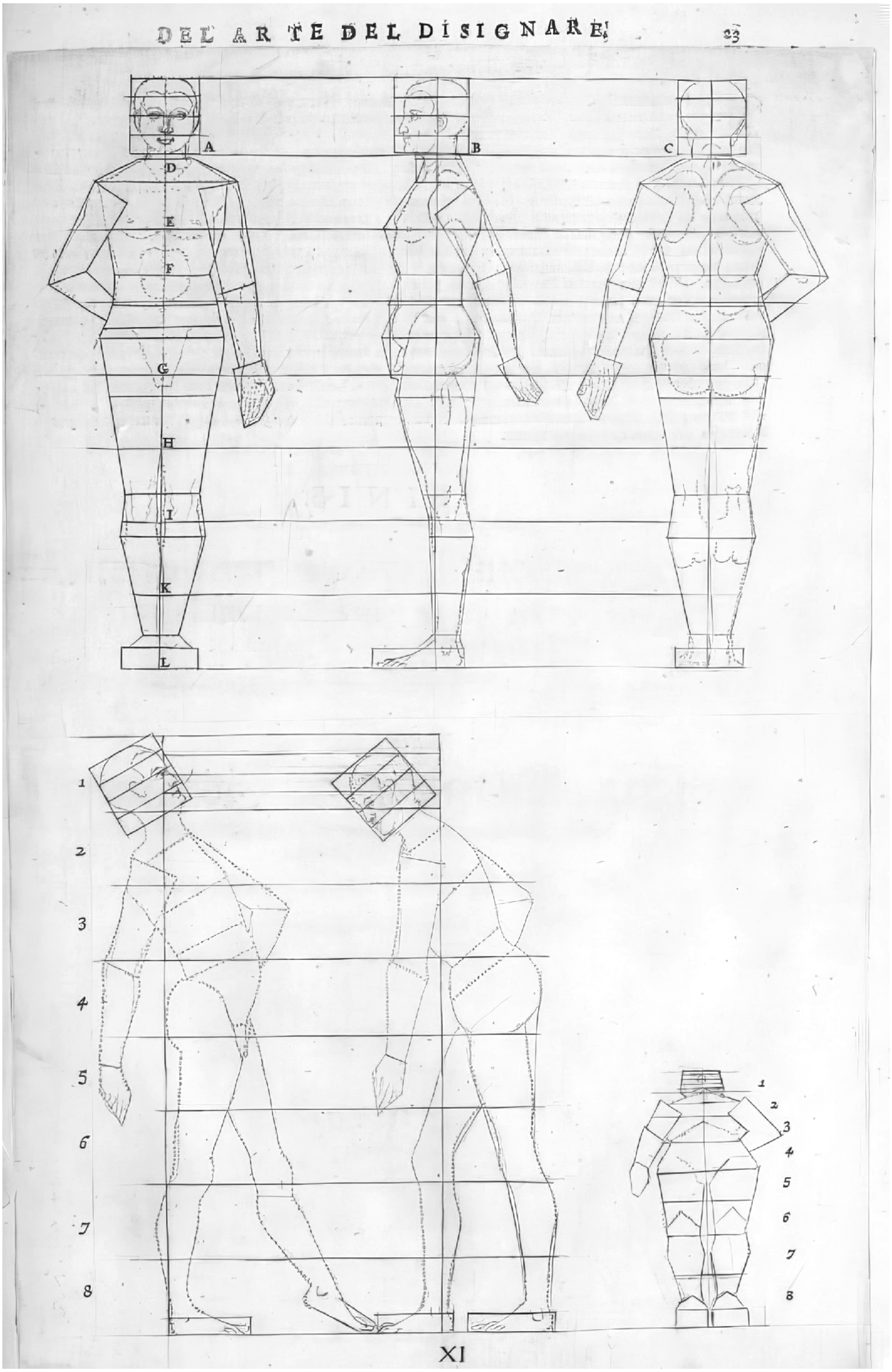
Because our drawings are of flat painting, yet they must still appear raised in relief to the eye, and since this book should serve sculptors as well as painters, I will represent my man of six heads tall in the form of blocks attached to each other, as shown in the following figure, in six different changes of view:

1. Standing, seen from the front
2. Seen from behind
3. In profile
4. Elevated upwards
5. Lowered down to the ground
6. Lying down on the ground

By this method, one may thoroughly understand how measurements appear to change depending on the viewpoint. Even though the view shifts, the proportions remain in their true forms — they only lengthen or foreshorten.

And as the first division cuts the heads A, B, C, D (which constitutes the head), the second cuts across the chest at E, the third across the navel at F, the fourth at the genital area at G, the fifth across the thighs at H, the sixth at the knee at I, the seventh below the calf at J, and the eighth and last at the sole of the foot at K.

These are the fixed measurements. And even though the models are shown in three varied positions, the measurements still retain a proportional harmony and consistency in their placement.



DEL ARTE DEL DISIGNARE 23

A
B
C
D
E
F
G
H
I
K
L
1
2
3
4
5
6
7
8
1
2
3
4
5
6
7
8

XI

The Third Part of the Art of Drawing

Containing various poses of nude women, whether stout, average, tall, or unattractive; all drawn from life.

Including their measurements and proportions, very useful and necessary for all students of this art.

Sculptors and painters, both ancient and modern, have established the perfection of their art chiefly through the description of the proportions of the human body, male or female. The great architect Vitruvius, in his seventh book, discusses nothing else. And the prince of painters, Albrecht Dürer, in his first book on human proportions, while describing the female figure, states that she has an equal harmony of parts with the male—except that her limbs are more delicate and refined. He also notes that a woman has narrower shoulders and broader hips, and that the whole structure of her body is more agile.

To measure her, one must draw a vertical line from the top of the head (point A) down to the sole of the foot (point I), which we divide as follows:

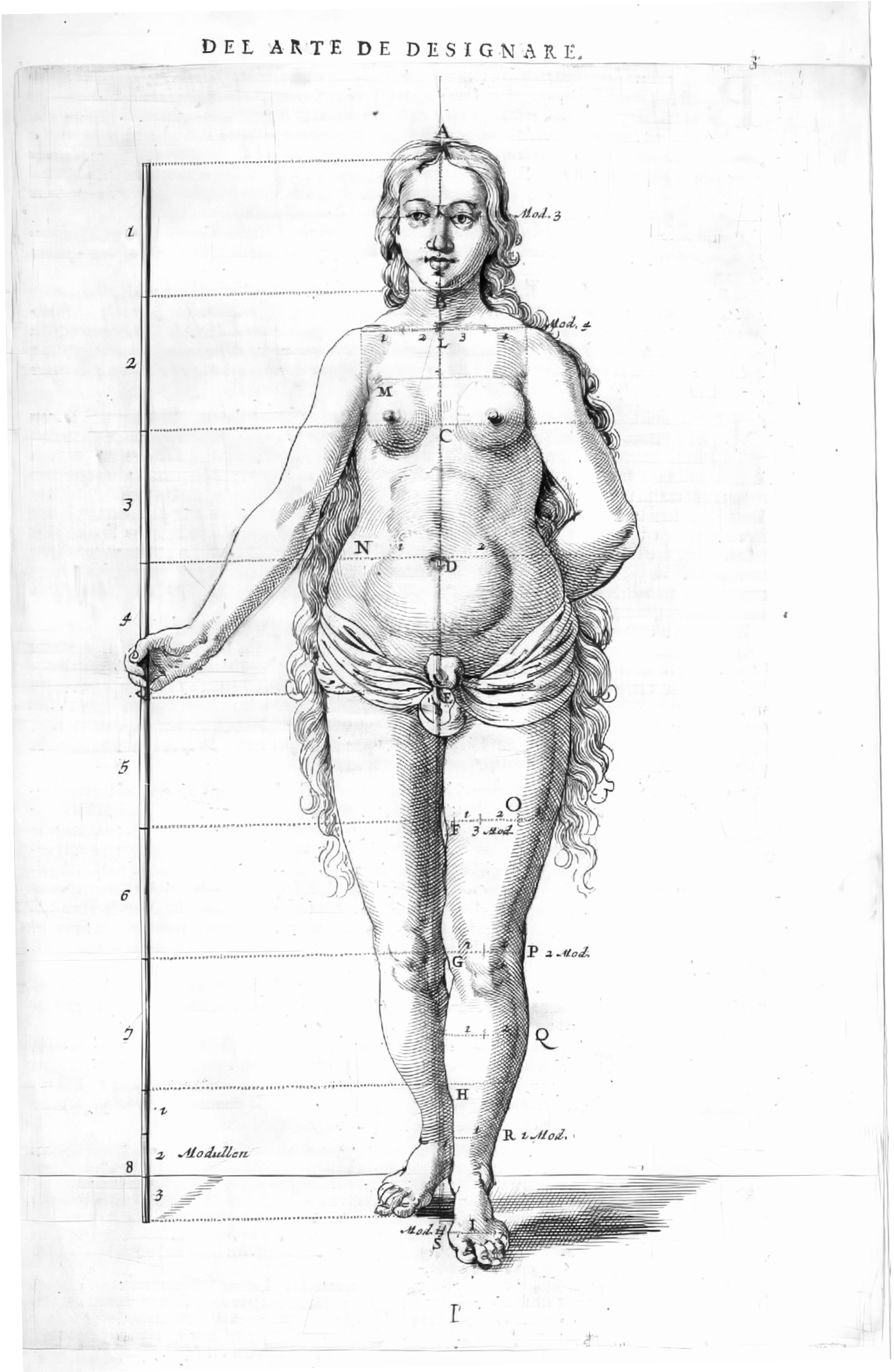
- **A–B**: the head
- **C**: placed at the hollow of the stomach, between the breasts
- **D**: at the navel
- **E**: at the mound of the vulva
- **F**: at the inner thighs
- **G**: at the knees
- **H**: at the mid-point of the shin bone
- **I**: at the sole of the foot

This gives us her height. Now let us see what she has in terms of width:

- The **head** (D) is three modules wide at the nose
- The **shoulders** (L) are one head wide, or four noses across
- At the **armpits** (M), she is one head wide
- At the **sides** (N), she is two face-widths across

- At the **thighs** (O), one face-width or three modules
- At the **knees** (P), two and a half modules
- The **calves** have the same width
- The **ankle** (R) is one module wide
- The **feet** (S), at the toes, are also one module wide
- The **hand** (T), when fully extended, is three modules long and can cover the face

I believe this suffices for proportions. We will speak of beauty and perfection at the end of the second part of this book.


DEL ARTE DE DESIGNARE.
3
A
Mod. 3
B
Mod. 4
1 2 L 3
M
C
N
D
E
O
F 3 Mod.
P 2 Mod.
G
Q
H
R 1 Mod.
Mod. S
I
1
2
3
4
5
6
7
8
1
2 Modullen
3
I

Since women have the same overall proportions as men, except that their shoulders are one module or nose-width broader, and their hips are also one module broader, I will use this as a basis. And since I have already demonstrated the woman from the front using eight head-lengths (testes), I also wish to show her from the back and in profile.

To do this, I measure her in the following way:
I draw a vertical line from the top of the head (point A) down to the sole of the foot (point I), and divide it as follows:

1. A to B – the hollow of the neck (first division)
2. B to C – the hollow of the back (second)
3. C to D – the base of the spine (third)
4. D to E – the division of the buttocks (fourth)
5. E to F – just below the top of the thigh (fifth)
6. F to G – just below the knees (sixth)
7. G to H – the bottom of the calf (seventh)
8. H to I – the sole of the foot (eighth and final division)

As for the width, it retains the same proportions as seen from the front.

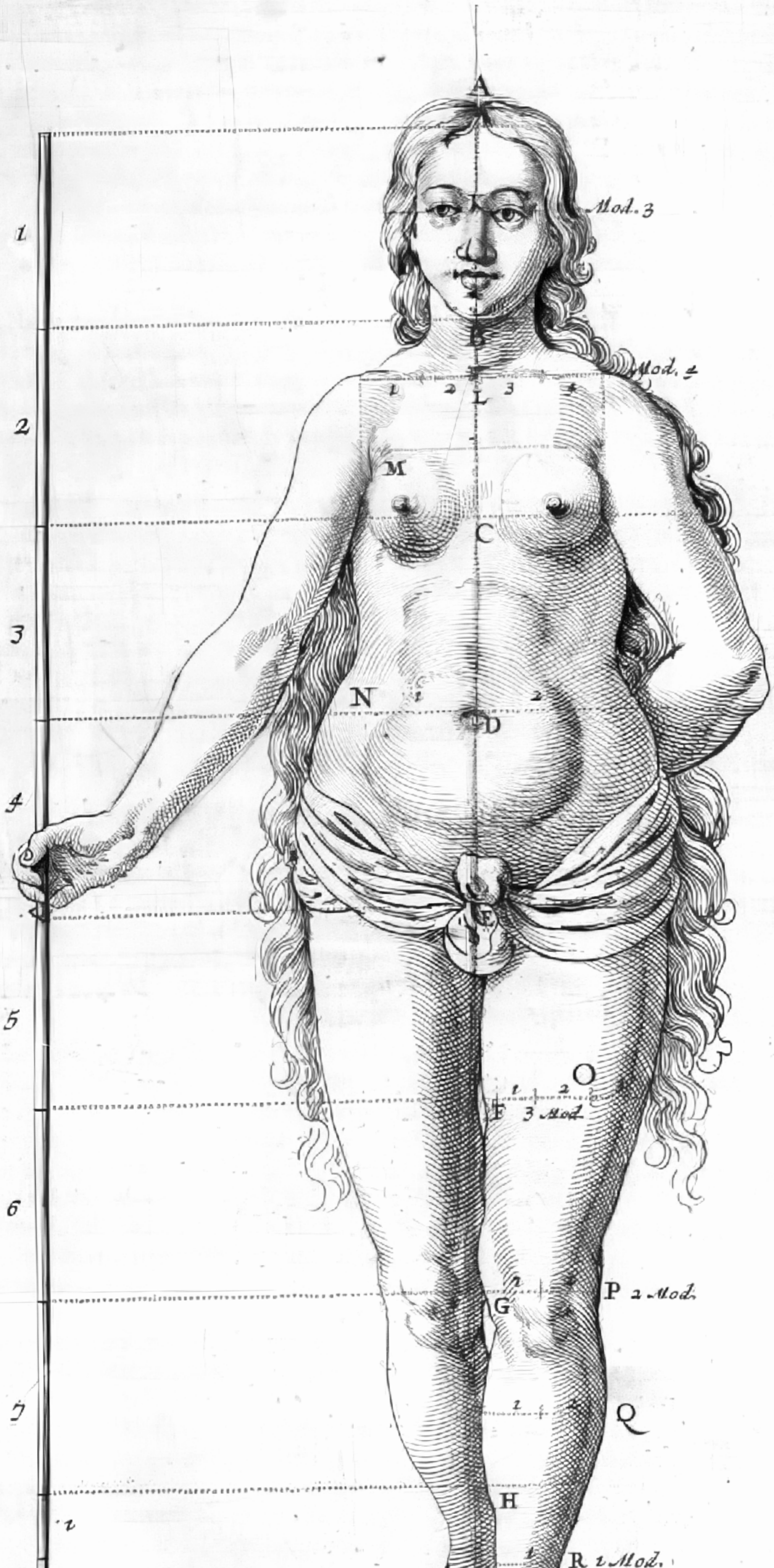
Now, briefly I will describe the measurements in profile:

I again draw a vertical line from the top of the head (point K) to the sole of the foot (point S).

Then I divide it as follows:

1. K to L – down to below the shoulder blades (first part)
2. L to M – just above the navel (second part)
3. M to N – aligned with the pubic area (third part)
4. N to O – just below the fullness of the thigh (fourth part)
5. O to P – just below the knees (fifth part)
6. P to Q – below the calf (sixth part)
7. Q to R – further down the calf (seventh part)
8. R to S – ends exactly at the sole of the foot (eighth and final part)

As for width, I have noted it in my chart, in both figures, using modules or nose-widths as units of measurement.


A
Mod. 3
1
B
Mod. 4
1 2 L 3 4
2
M
C
3
N 1 2
D
4
E
5
O
1 2
F 3 Mod
6
P 2 Mod.
G
2
7
1 2
Q
H
1
R 1 Mod.
2 Modullen
8
3
Mod. H
I
S

I

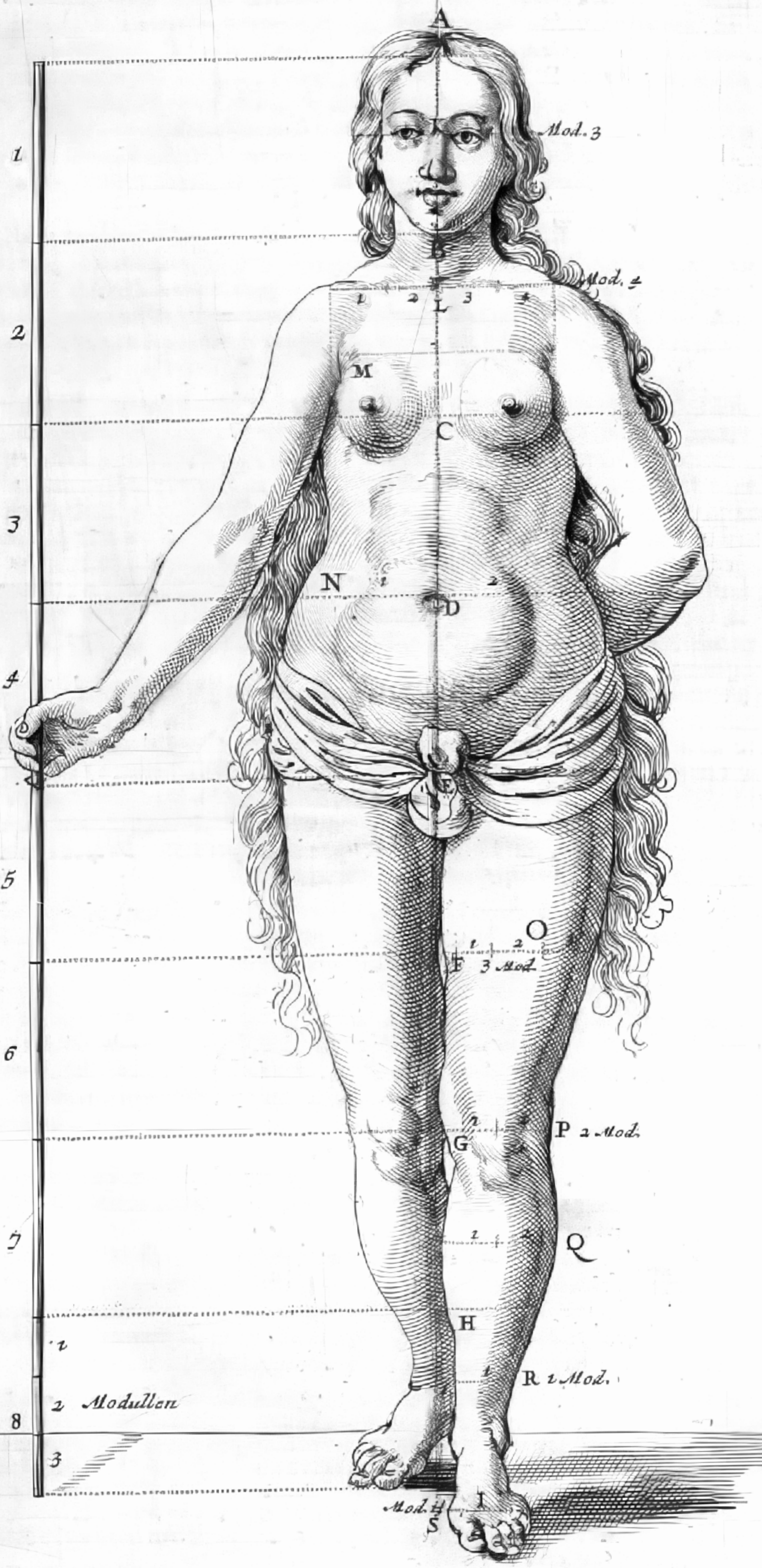
Female

Sculptors and painters, both ancient and modern, have scarcely ever grounded the perfection of their art on anything other than the description of the proportions of the human body—male or female—measured in eight heads. The great architect Vitruvius, in his seventh book, deals with nothing else, and the prince of painters, Albrecht Dürer, in his first book on human proportions, writes that the woman has an equal harmony of limbs with the man, except that her limbs are more delicate and smooth, her shoulders narrower, her hips wider, and the entire structure of her body more agile.

Now, to measure her, one must draw a perpendicular line from the top of the head (A) down to the sole of the foot (I), which we will divide as follows:
AB marks the head;
C lies over the hollow of the stomach, between the breasts;
D falls on the navel;
E on the mound of the vulva;
F between the thighs;
G on the knees;
H on the middle of the shinbone; and
I marks the sole of the foot.
This is her height. Now let us consider her width:

The head (D) is three modules wide at the nose;
the shoulders (L) are one head wide, or about four noses;
under the arms (M) she is one head wide;
at the flanks (N) she is two face-widths wide;
the top of the thighs (O) is one face or three modules wide;
the knees (P) measure two and a half modules, as does the calf of the leg;
the ankle (Q) is one module;
the foot (S) is one module wide at the toes.
The hand (T), when extended, measures three modules and is large enough to cover the face.

I believe this is sufficient for understanding the proportion. We will speak of beauty and perfection at the end of the second part of this book.


A
Mod. 3
B
Mod. 4
1 2 L 3 4
M
C
N 1 2
D
E
O
1 2
F 3 Mod.
P 2 Mod.
2
G
2
Q
H
1
R 1 Mod.
Mod. 1½
I
S
1
2
3
4
5
6
7
1
2 Modullen
8
3

I

Since women share the same overall proportion as men—except that their shoulders are one module (or nose-width) narrower, and their hips are one module wider—I intend to make use of this fact. And having already shown the woman of eight heads in front view, I now wish to depict her from the back and in profile.

To measure her, I proceed as follows: I draw a vertical line from the top of the head (**A**) down to the sole of the foot (**I**), which I divide as follows:

- From **A** to **B**, the first section, lands on the base of the neck.
- The second section reaches **C**, which marks the hollow of the back.
- The third lands on the small of the back, noted **D**.
- The fourth falls precisely at the separation of the buttocks, noted **E**.
- The fifth section reaches **F**, below the thigh.
- The sixth lands just beneath the knees, noted **G**.
- The seventh comes to the bottom of the calf, noted **H**.
- The eighth and final division falls squarely on the sole of the foot, marked **I**.

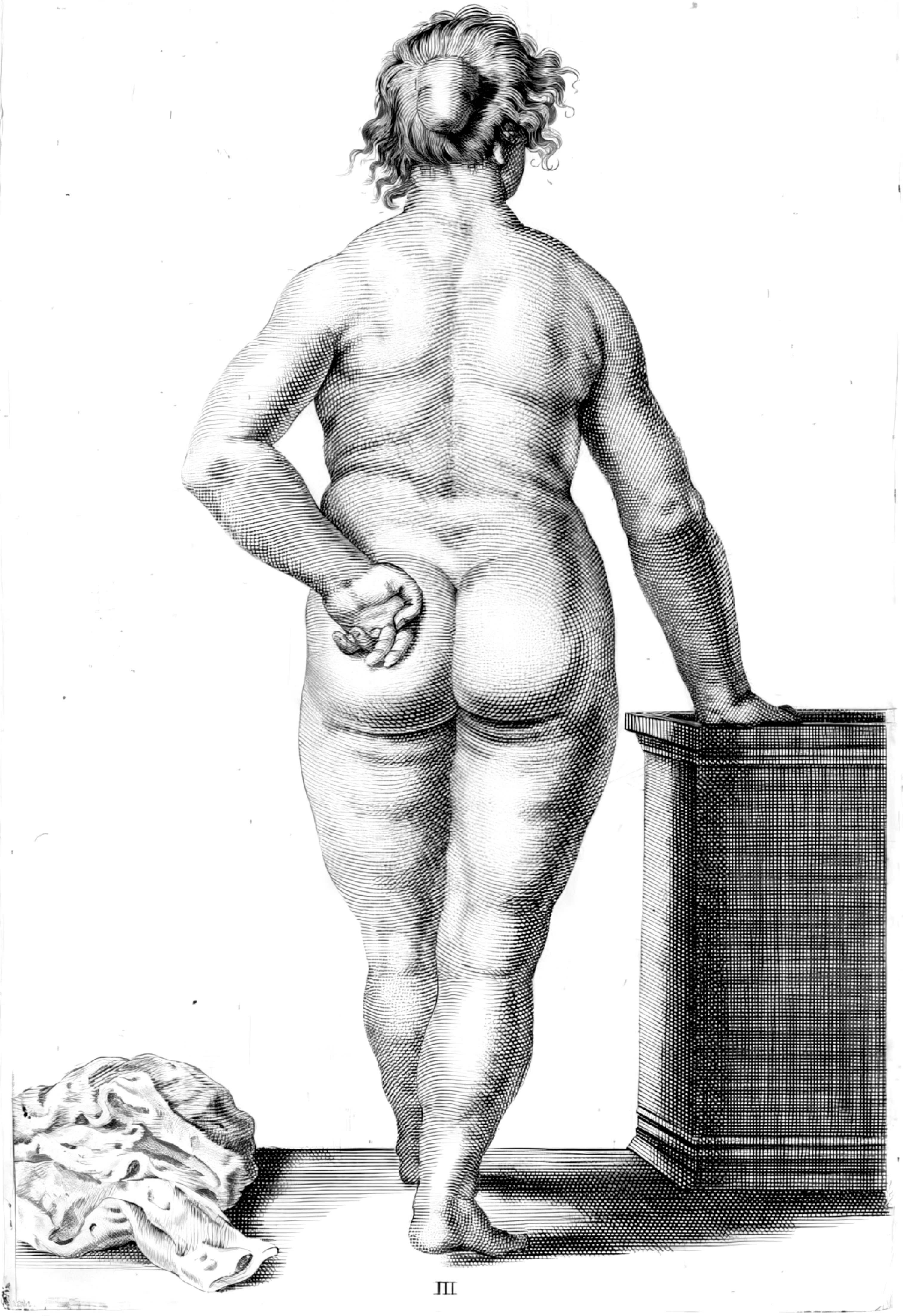
As for the width, it follows the same proportion as the front view. Now briefly, I shall describe the profile measurement.

Again, I draw a vertical line—from the top (**K**) to the sole of the foot (**S**).

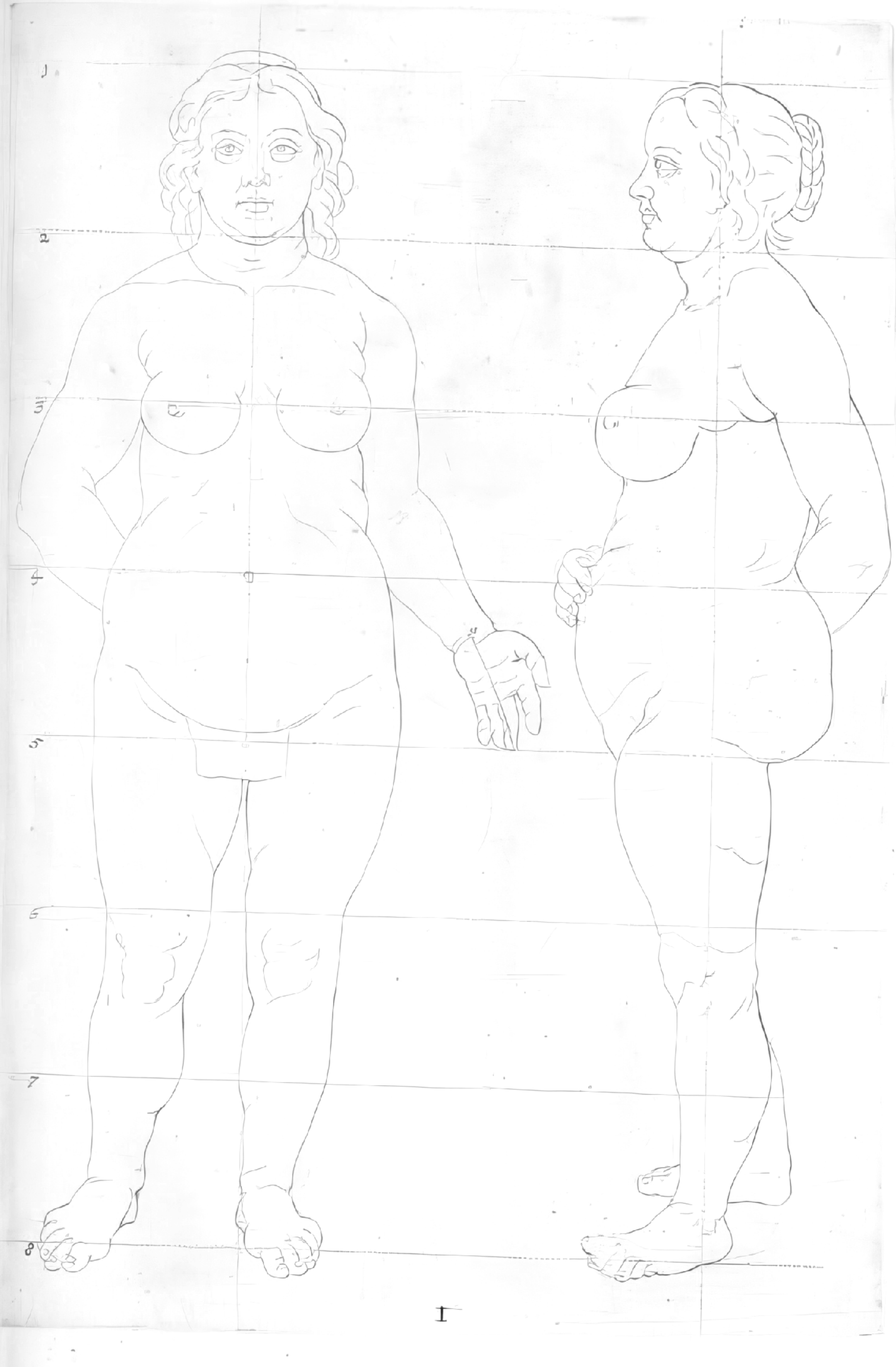
I measure it thus:

- From **K** to **L**, the first section, reaching just below the shoulder blades.
- **M**, the second, falls just above the navel.
- **N**, the third, lands directly on the pubic area.
- **O**, the fourth, falls just below the top of the thigh.
- **P**, the fifth, a little below that.
- **Q**, the sixth, lies beneath the knees.
- **R**, the seventh, reaches the lower part of the calf.
- **S**, the final division, falls exactly on the sole of the foot.

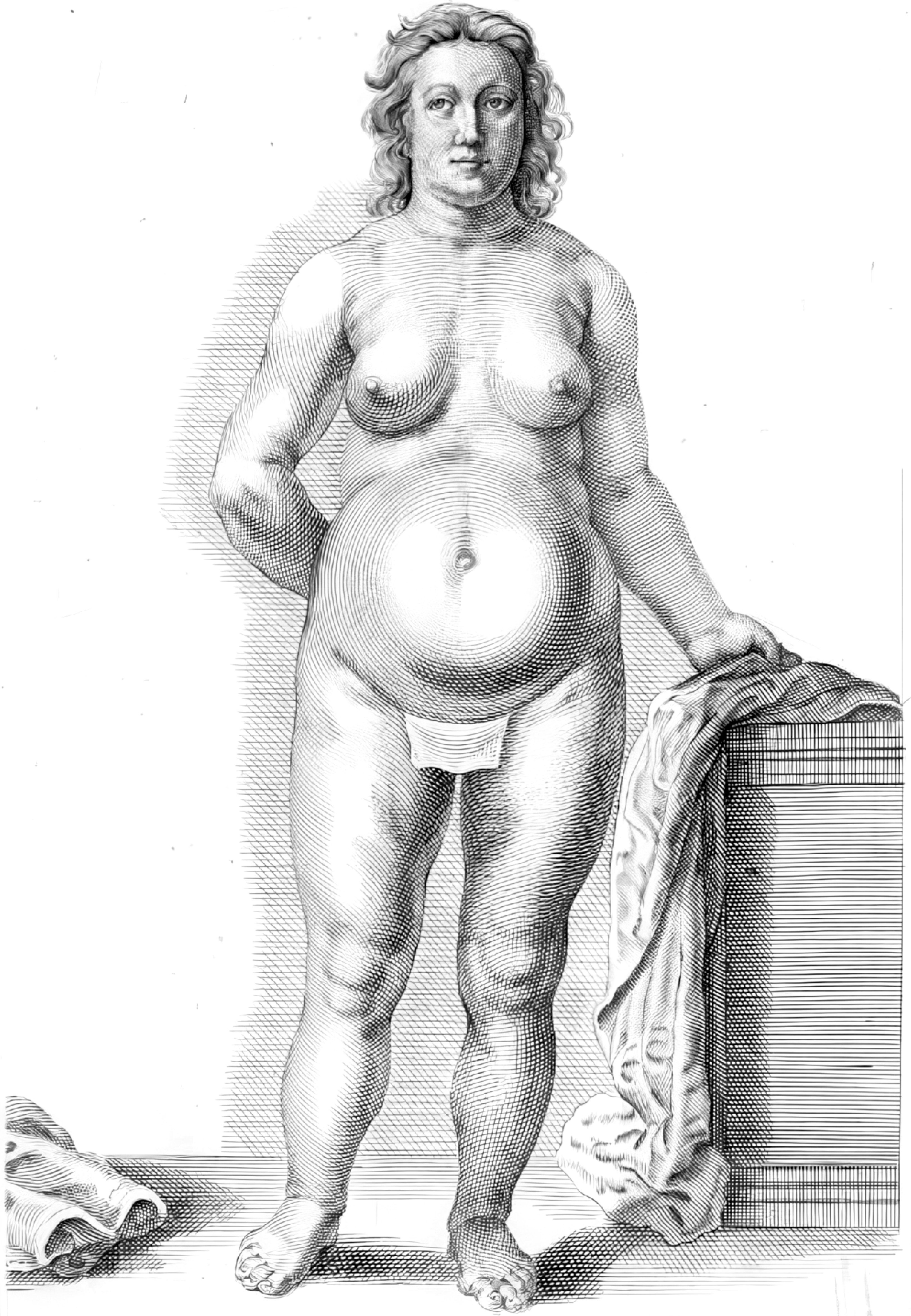
As for width, I have indicated all relevant measurements using modules (or nose-widths) in my table, across the two diagrams.



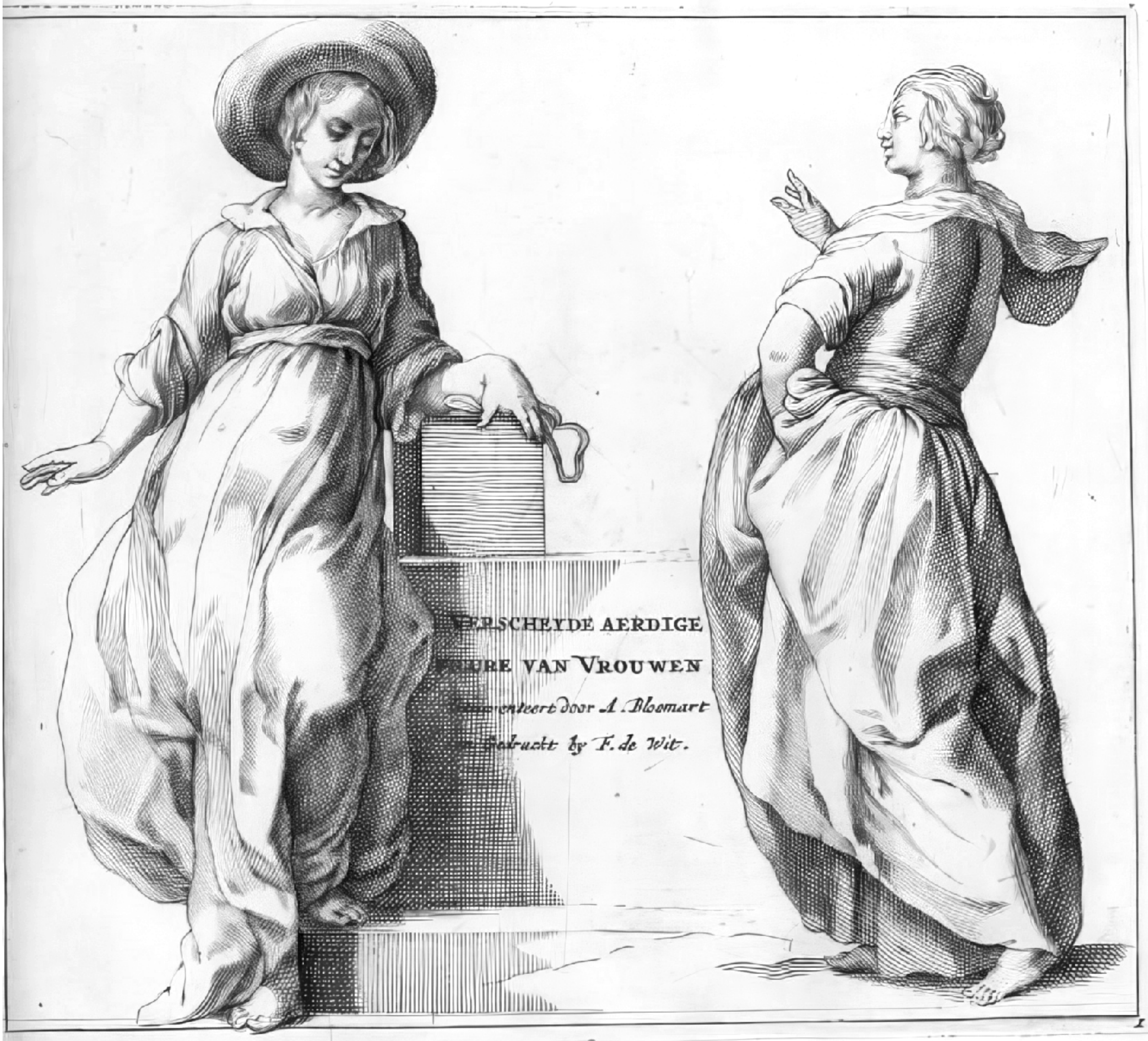
III



I



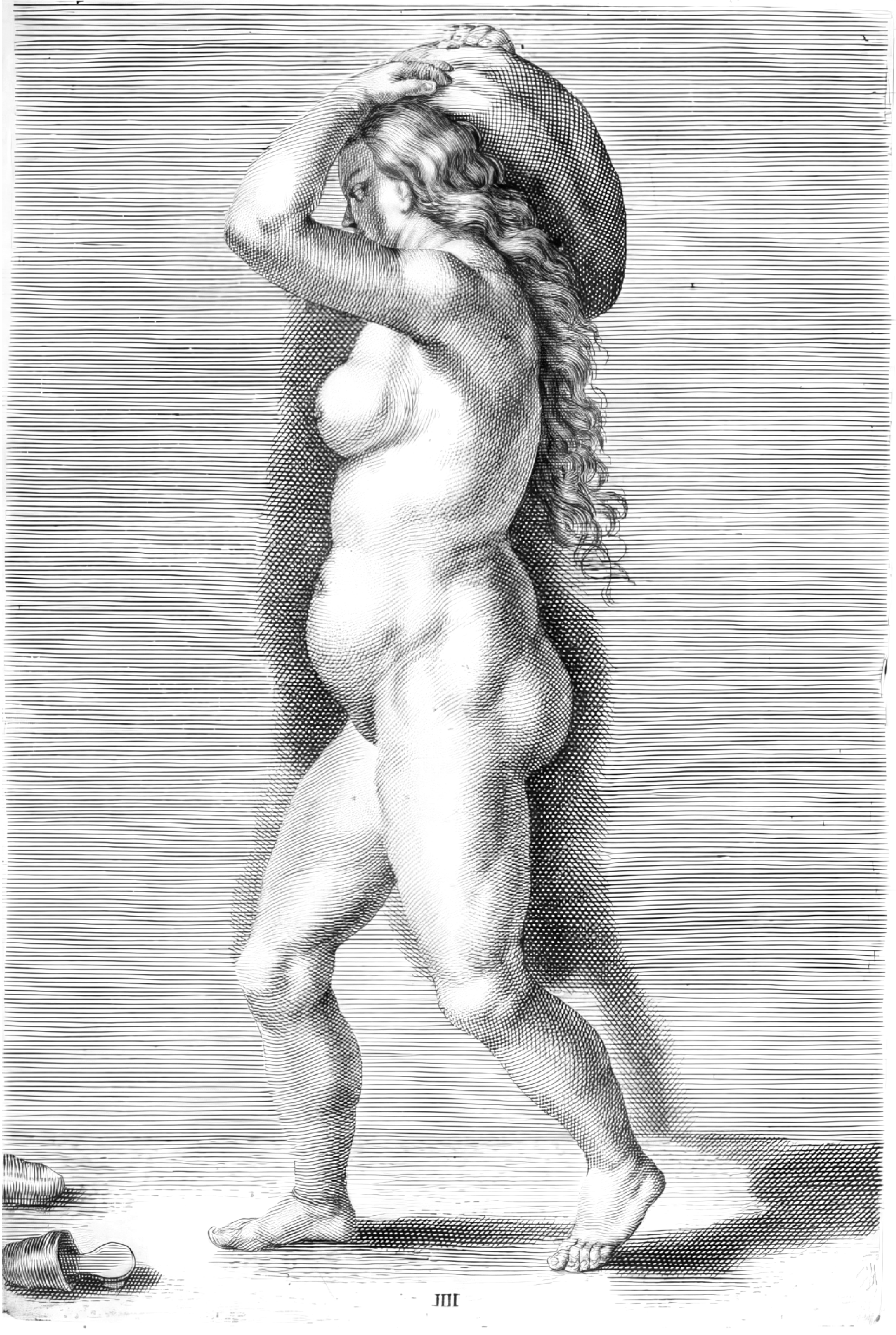
II



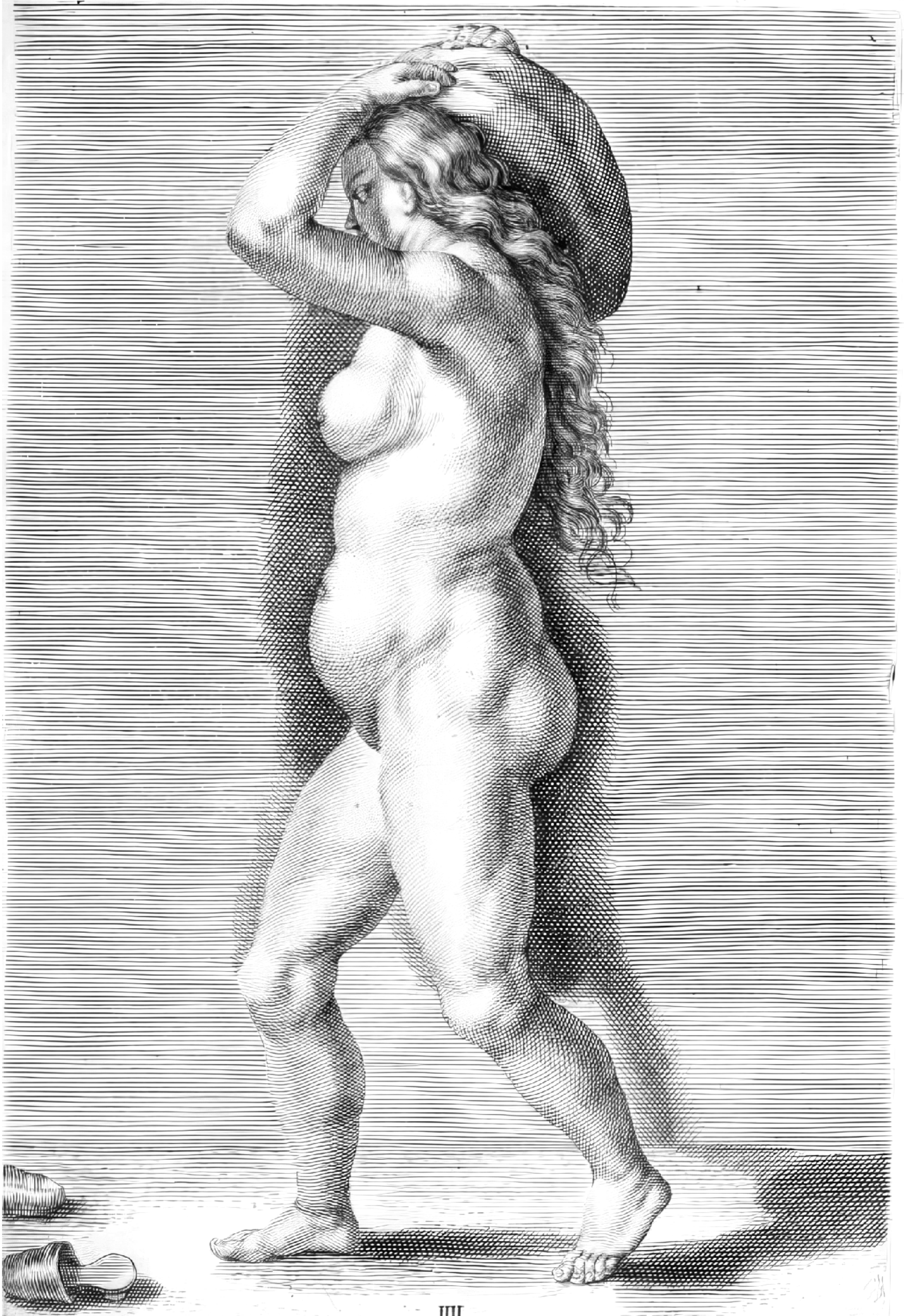
VERSCHEYDE AERDIGE
FIGURE VAN VROUWEN
Geinventeert door A. Bloemart
en Gedruckt by F. de Wit.

1

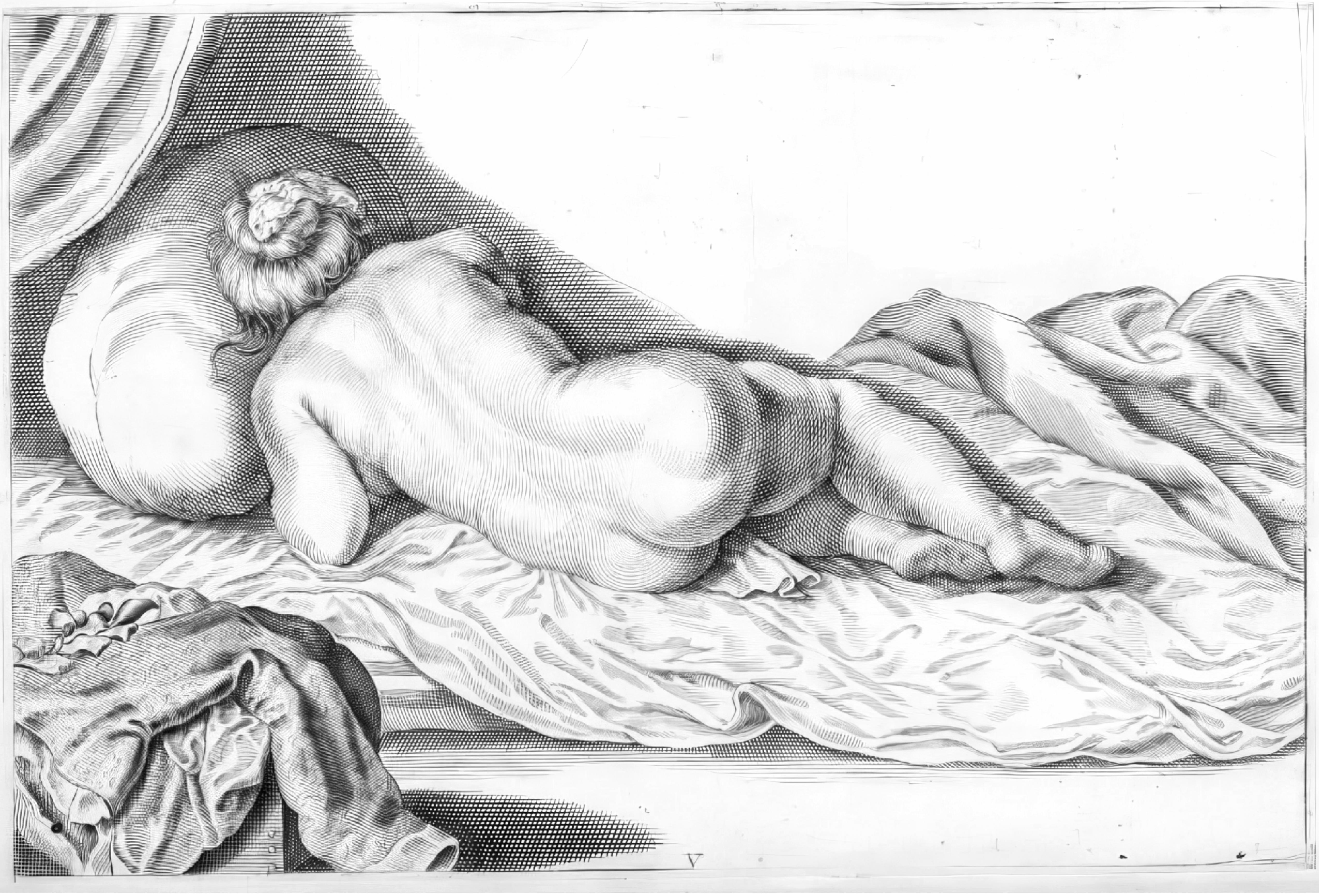
32

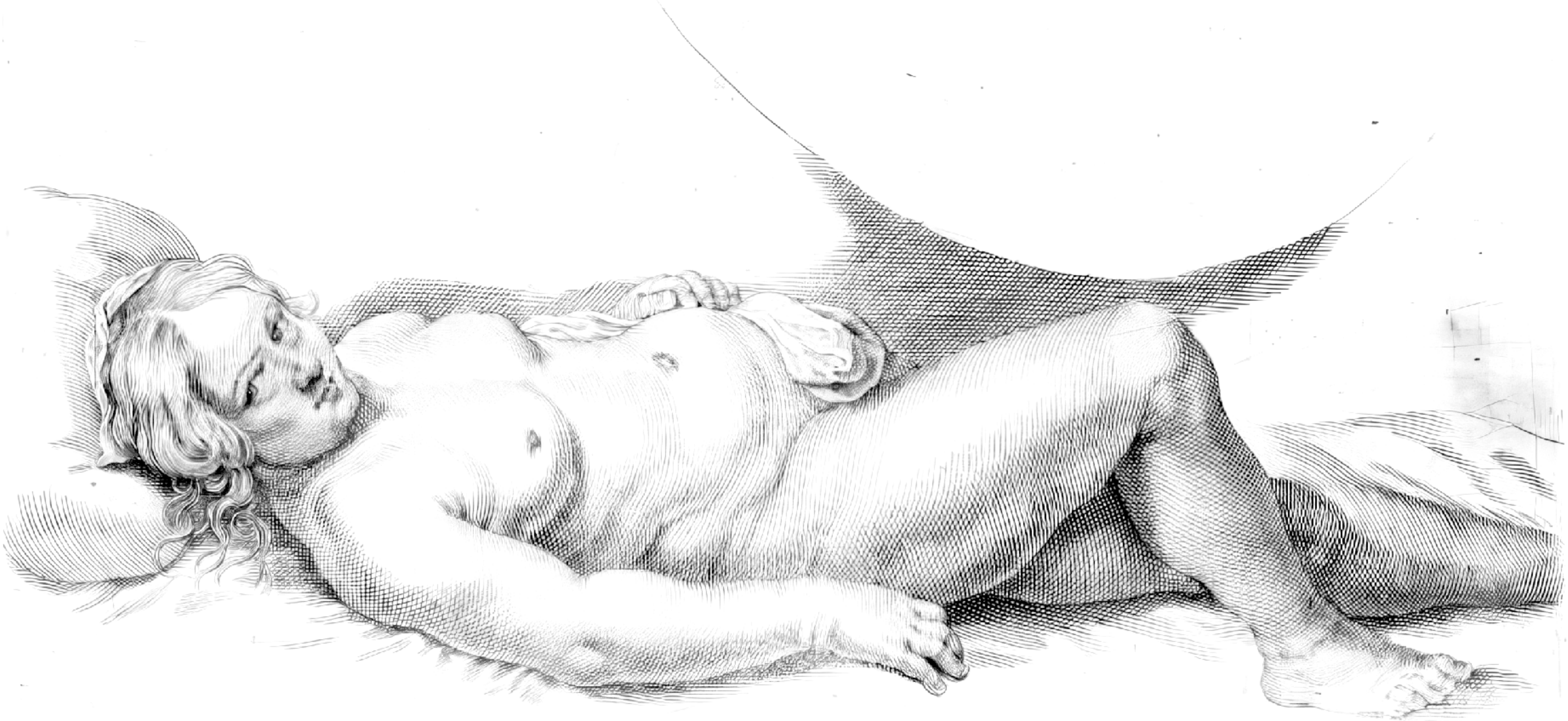


IIII

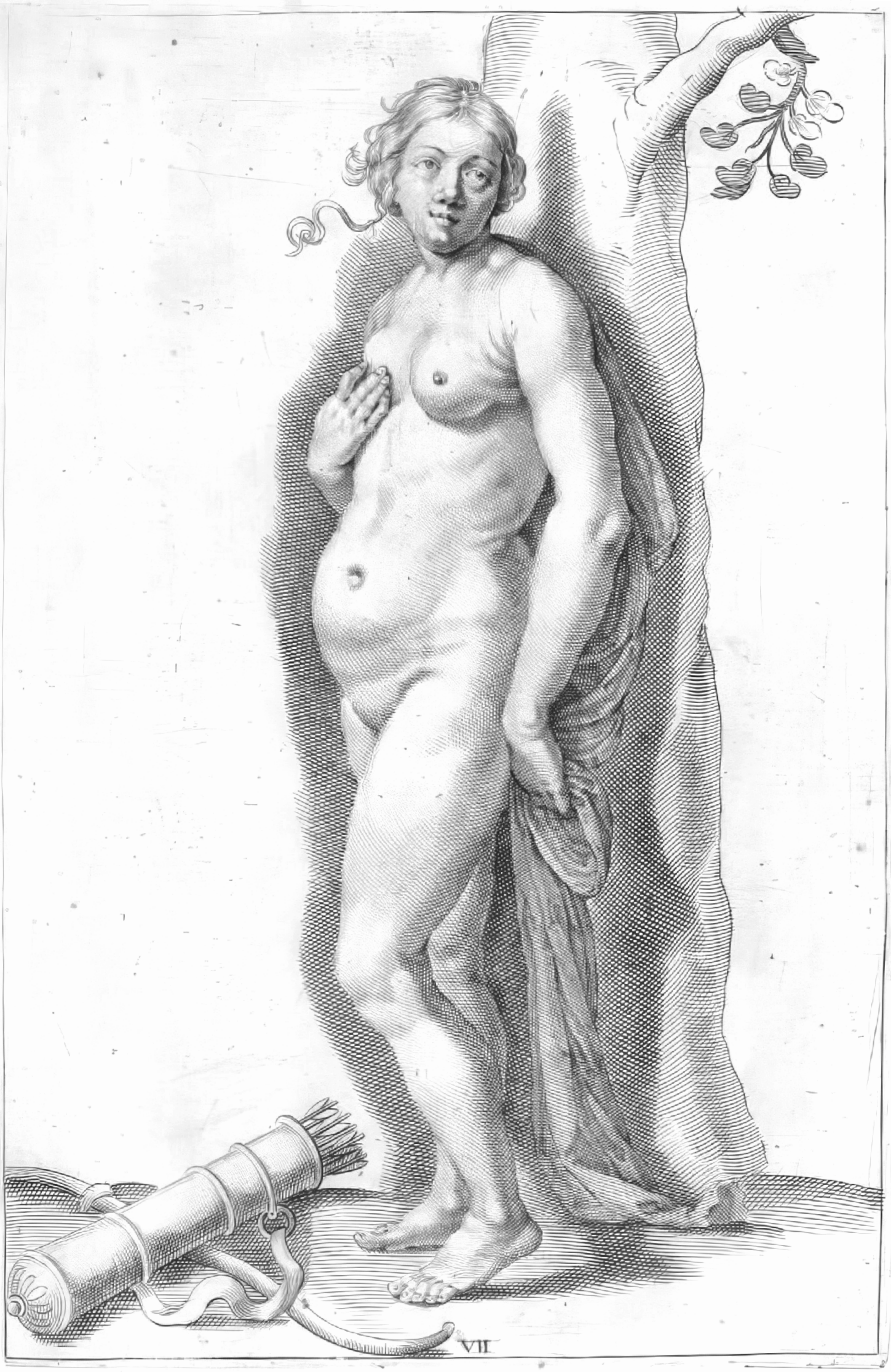


IIII

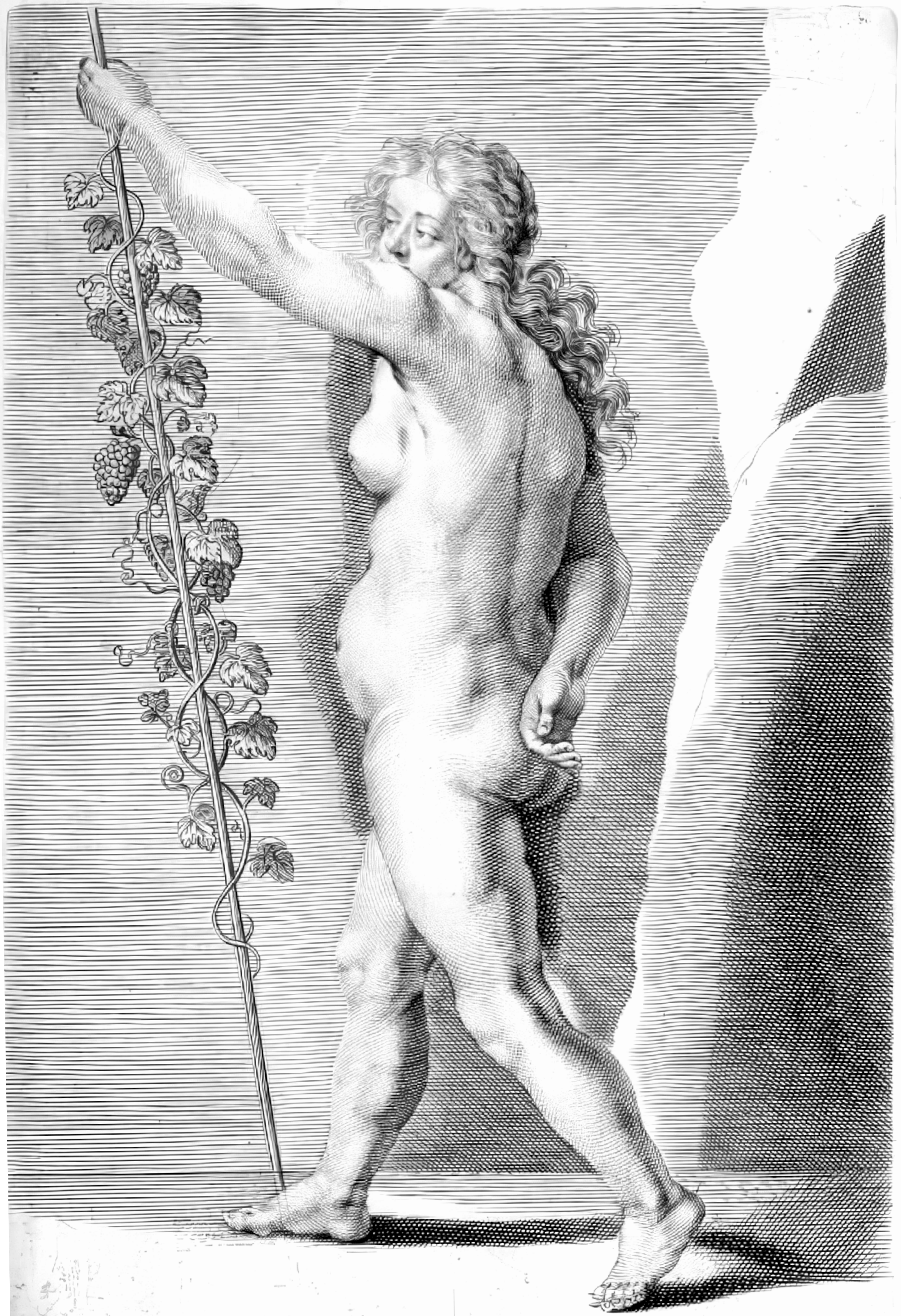

V



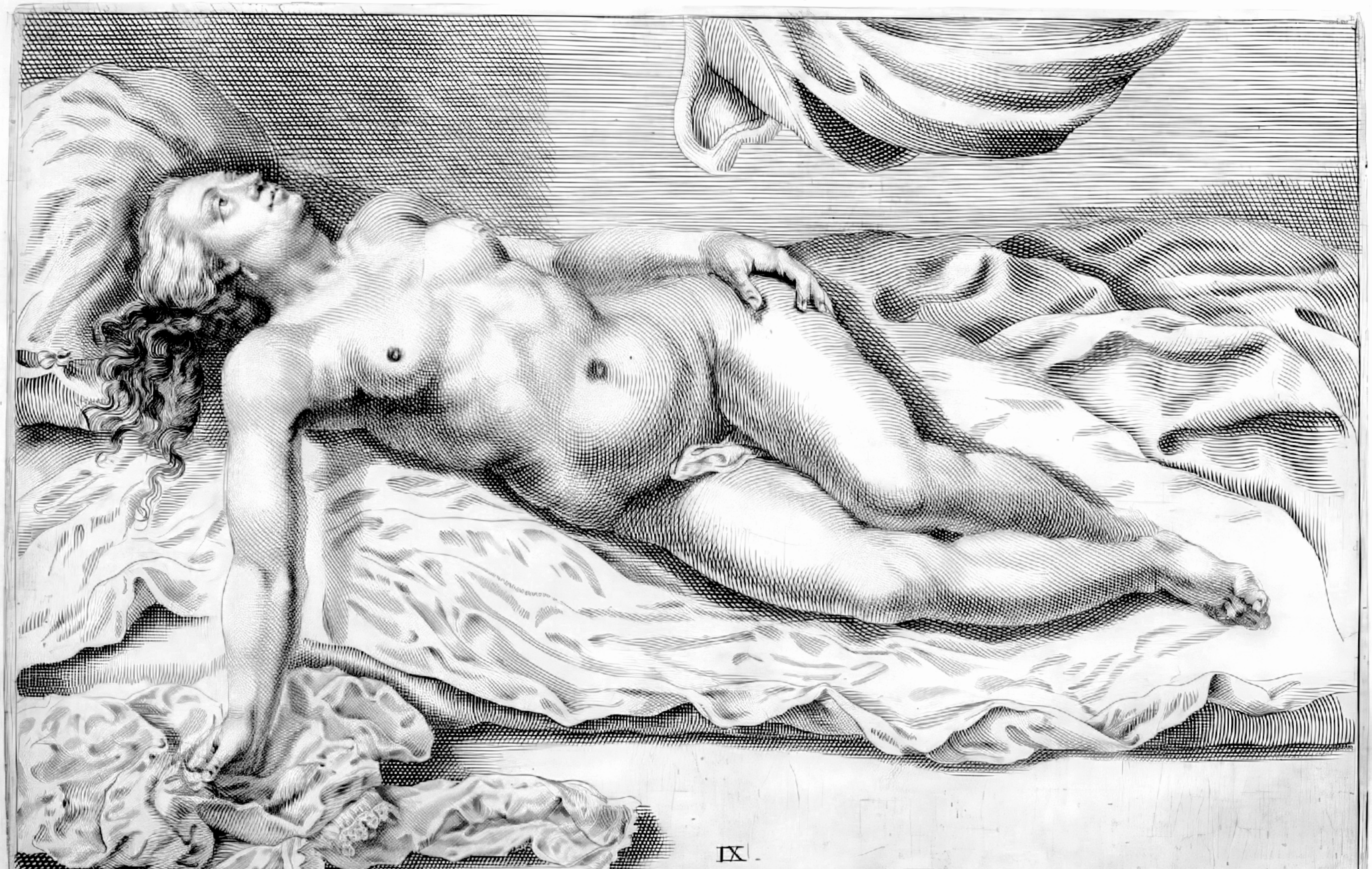
VI



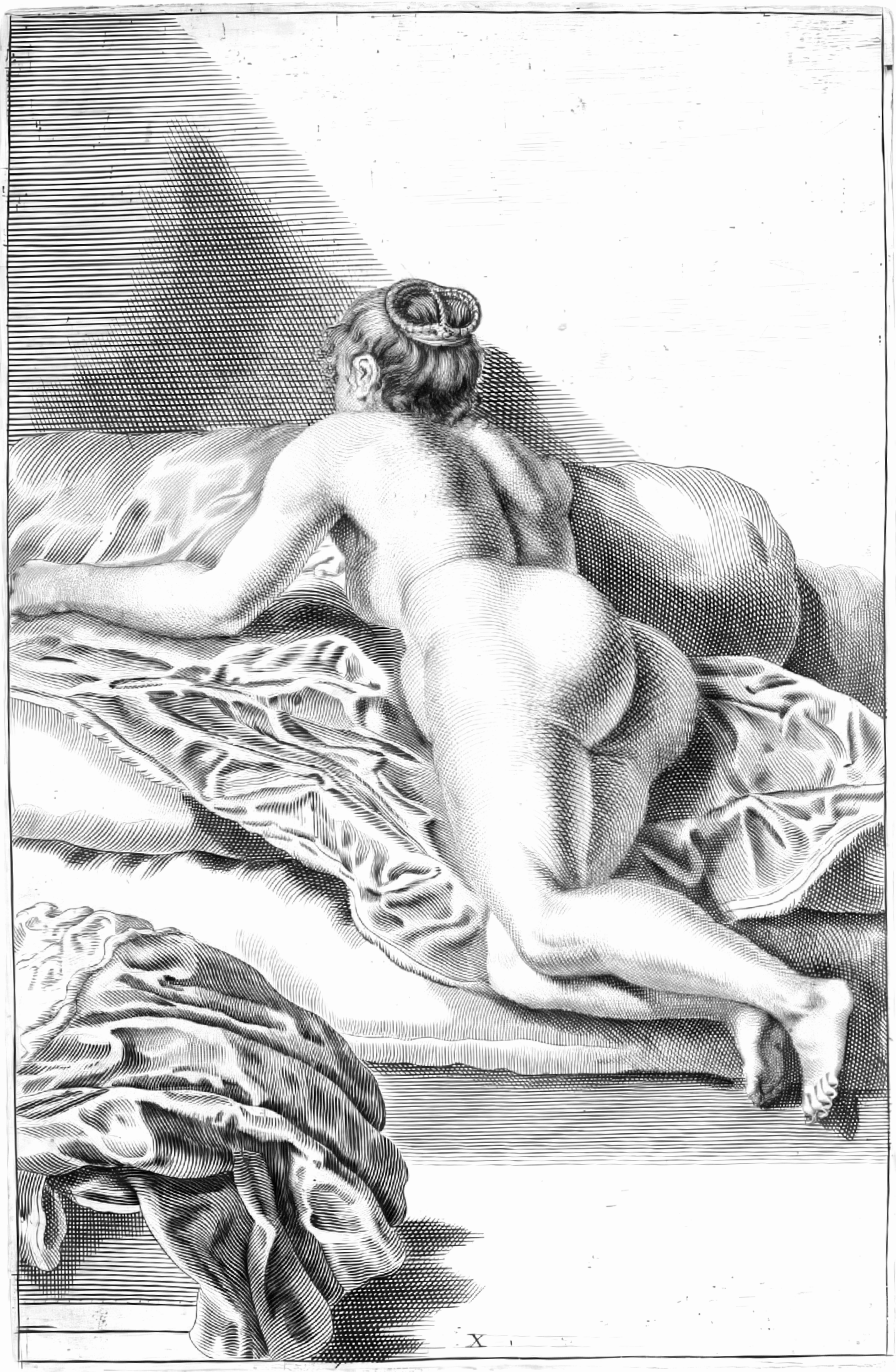
VII



VIII

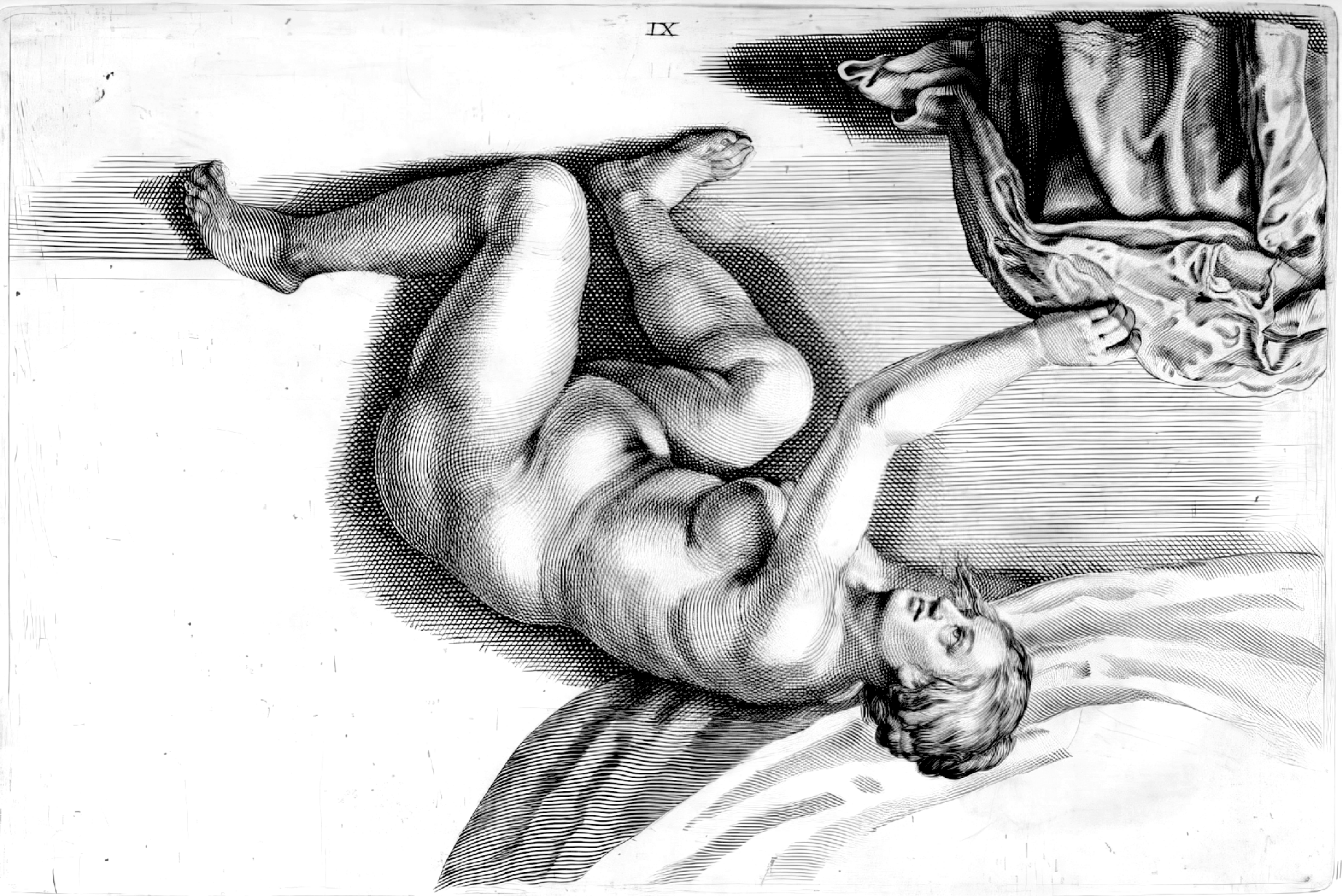


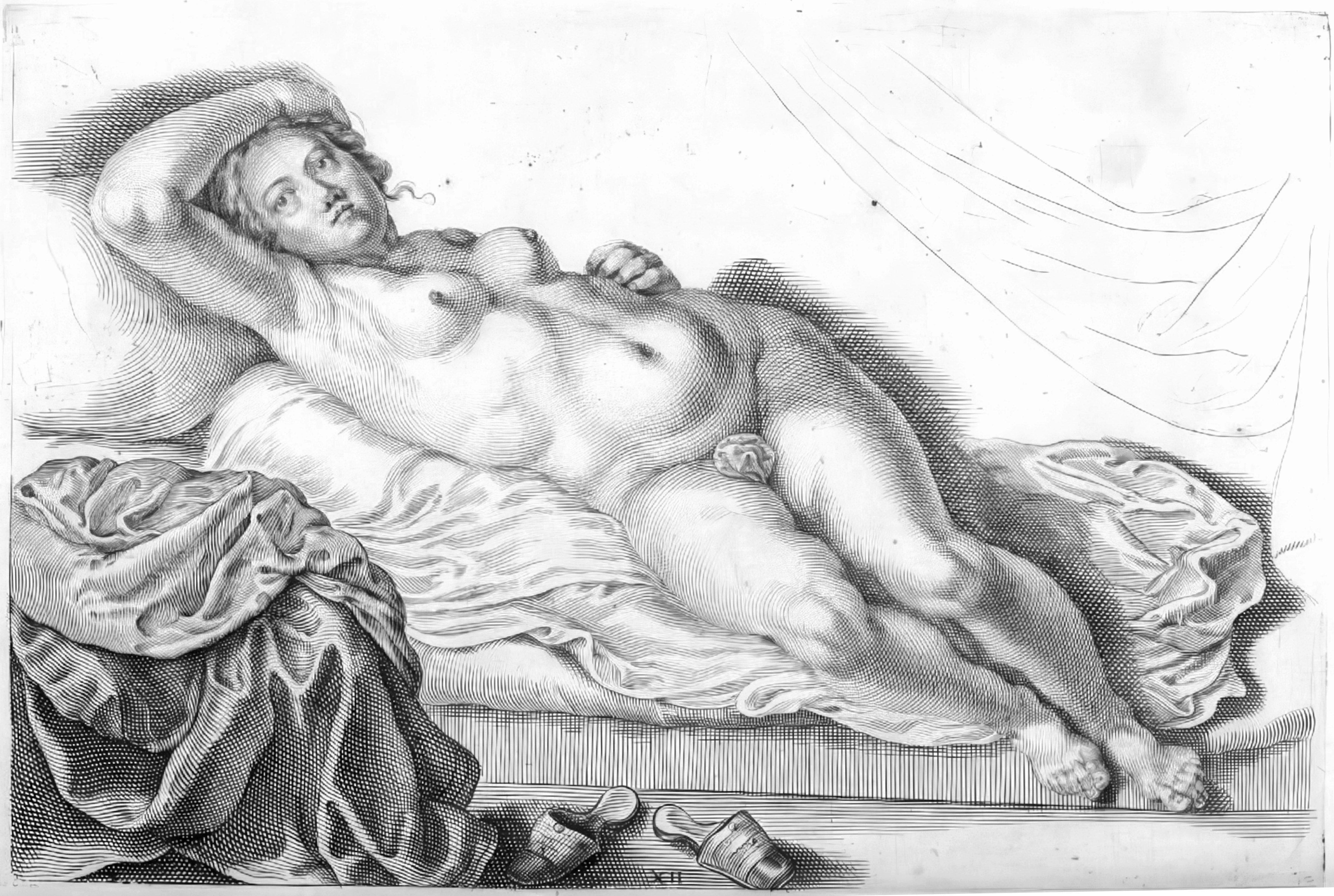
IX

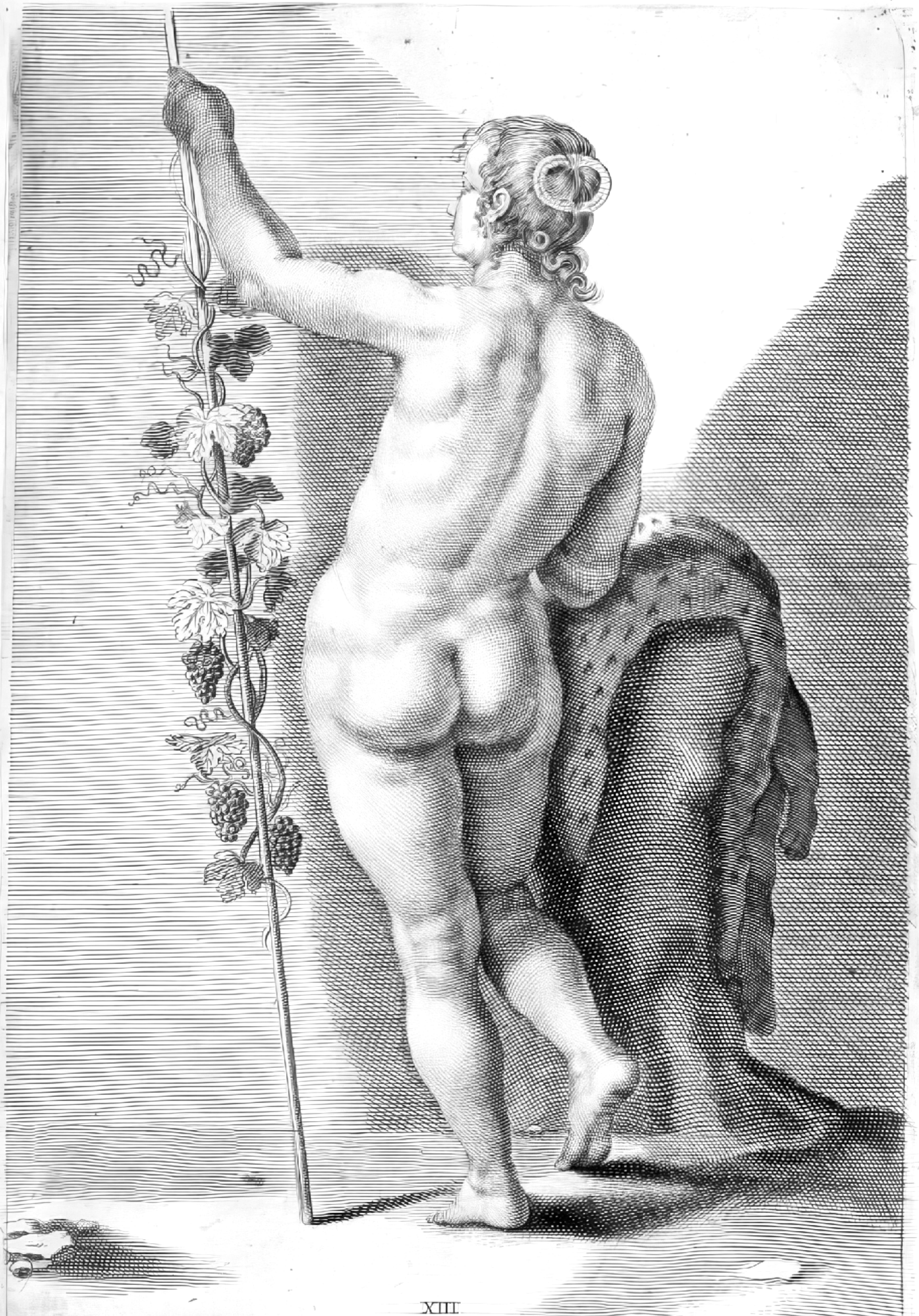


X

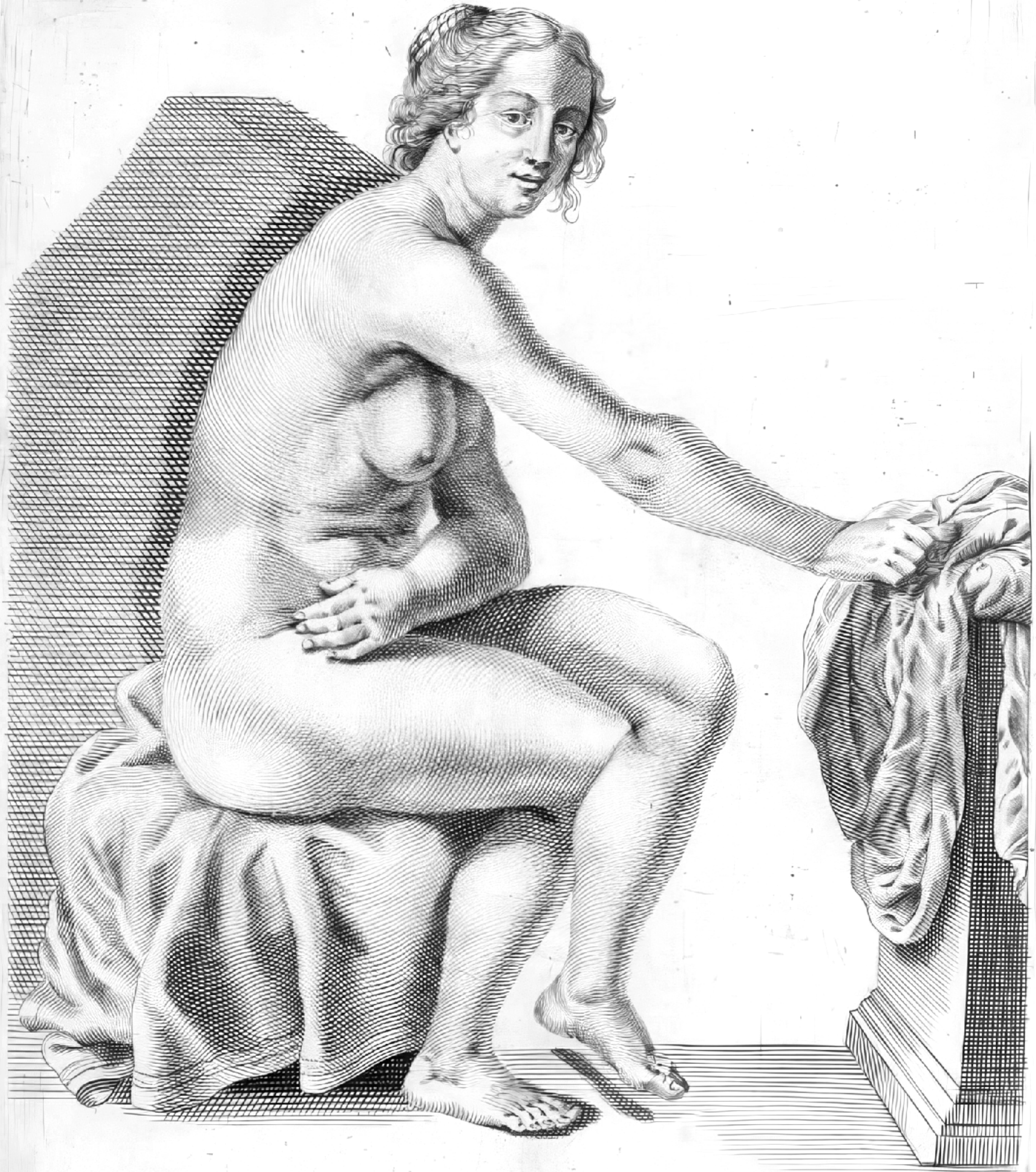
IX



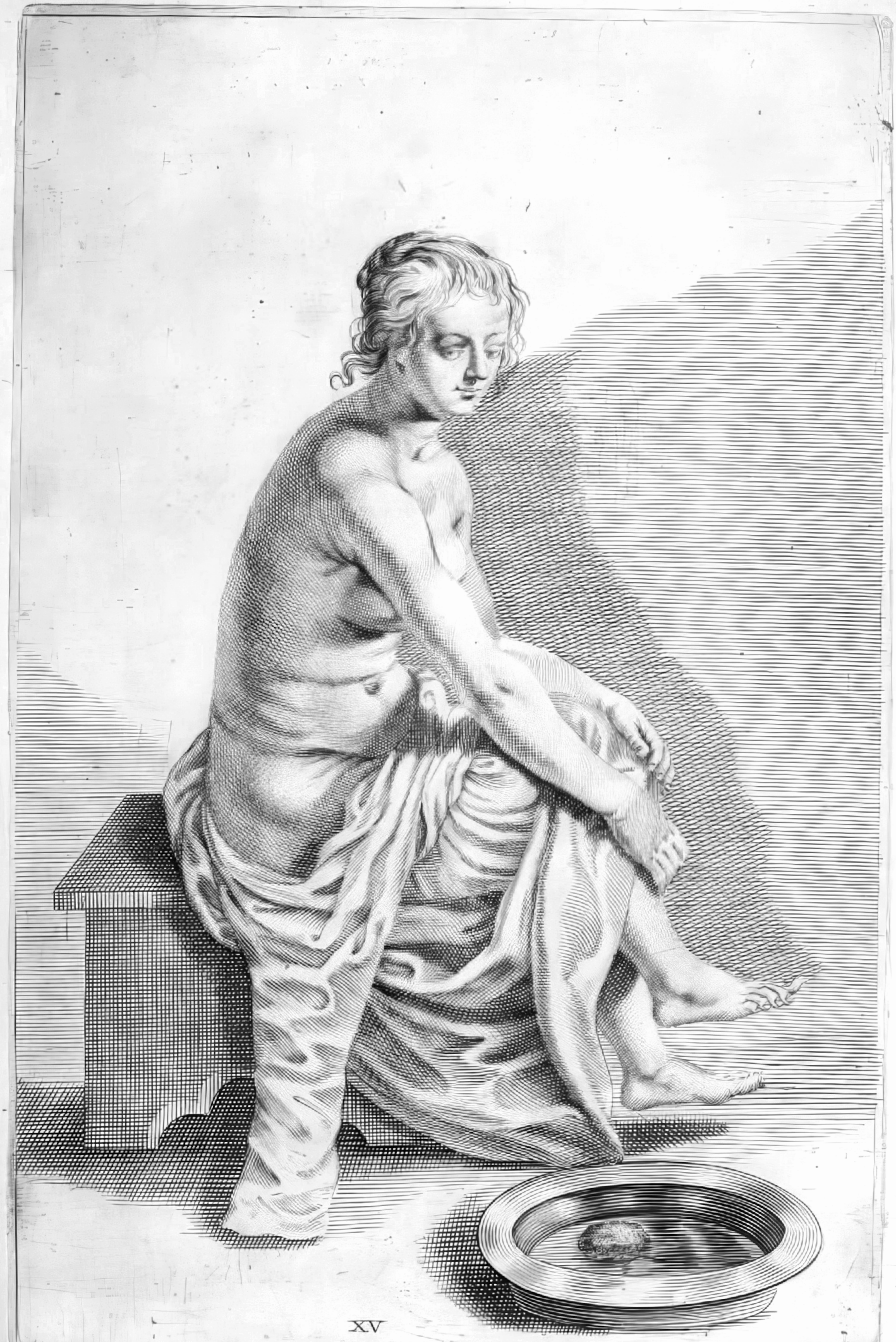

XII



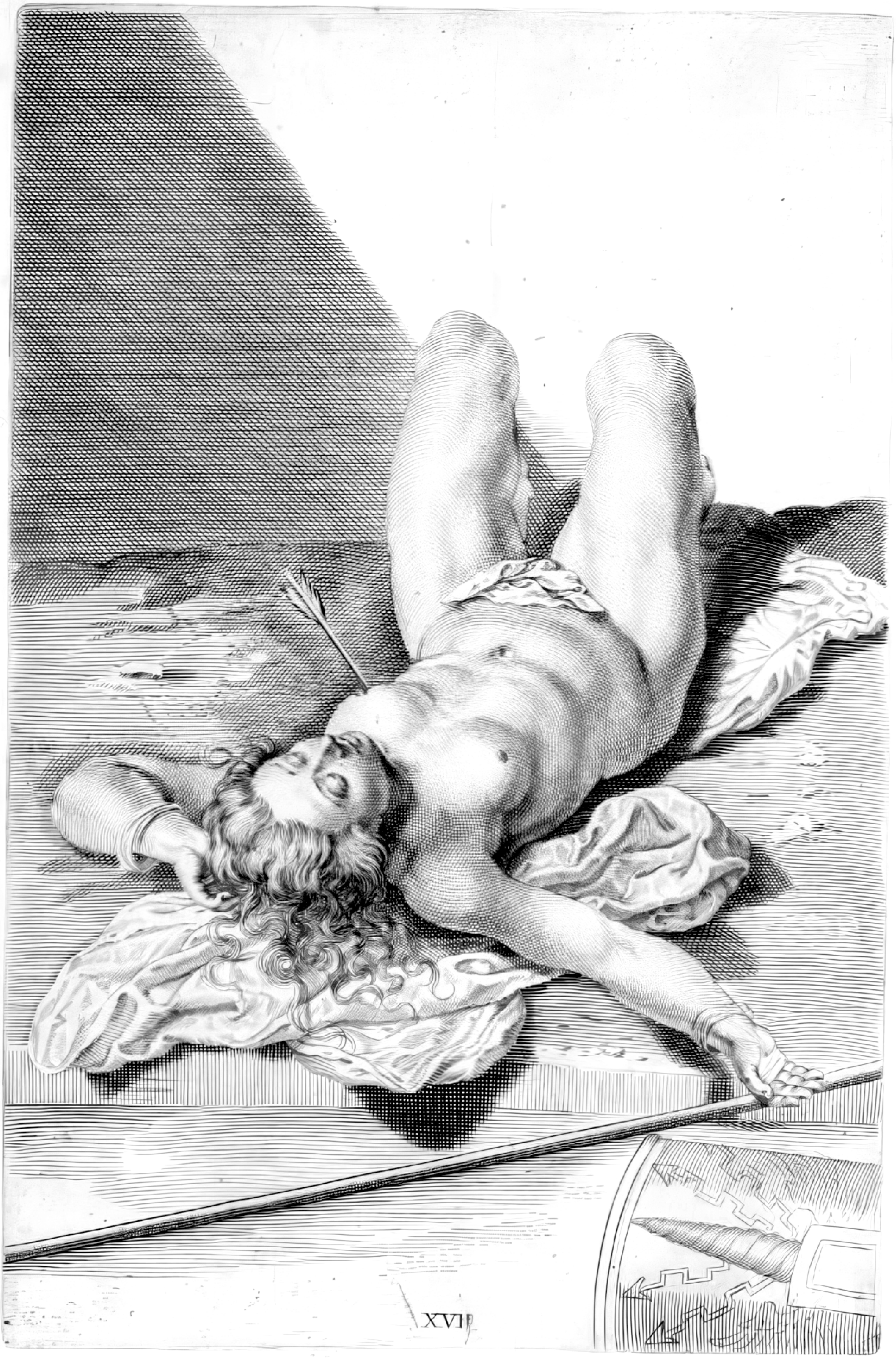
XIII



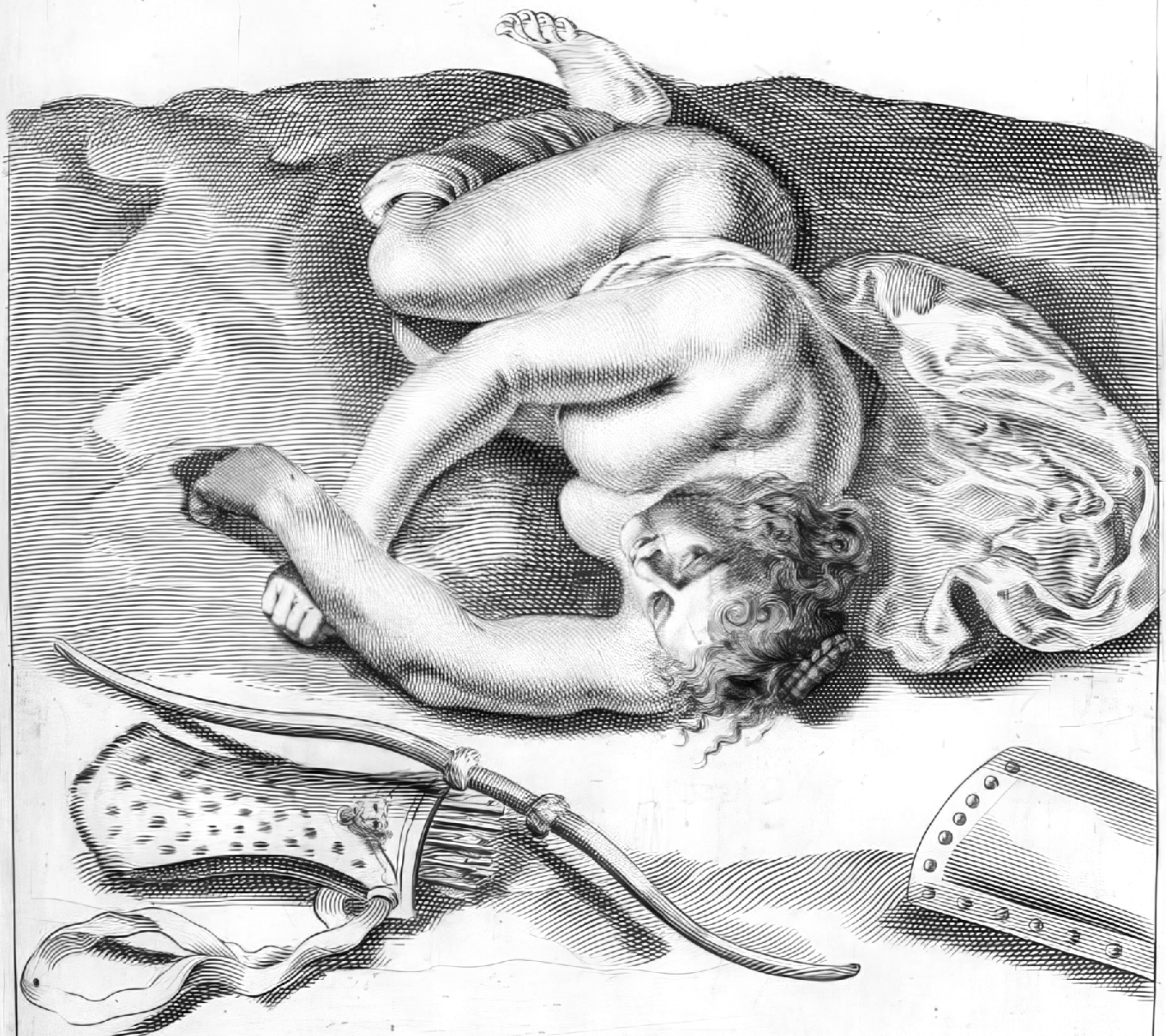
XIV



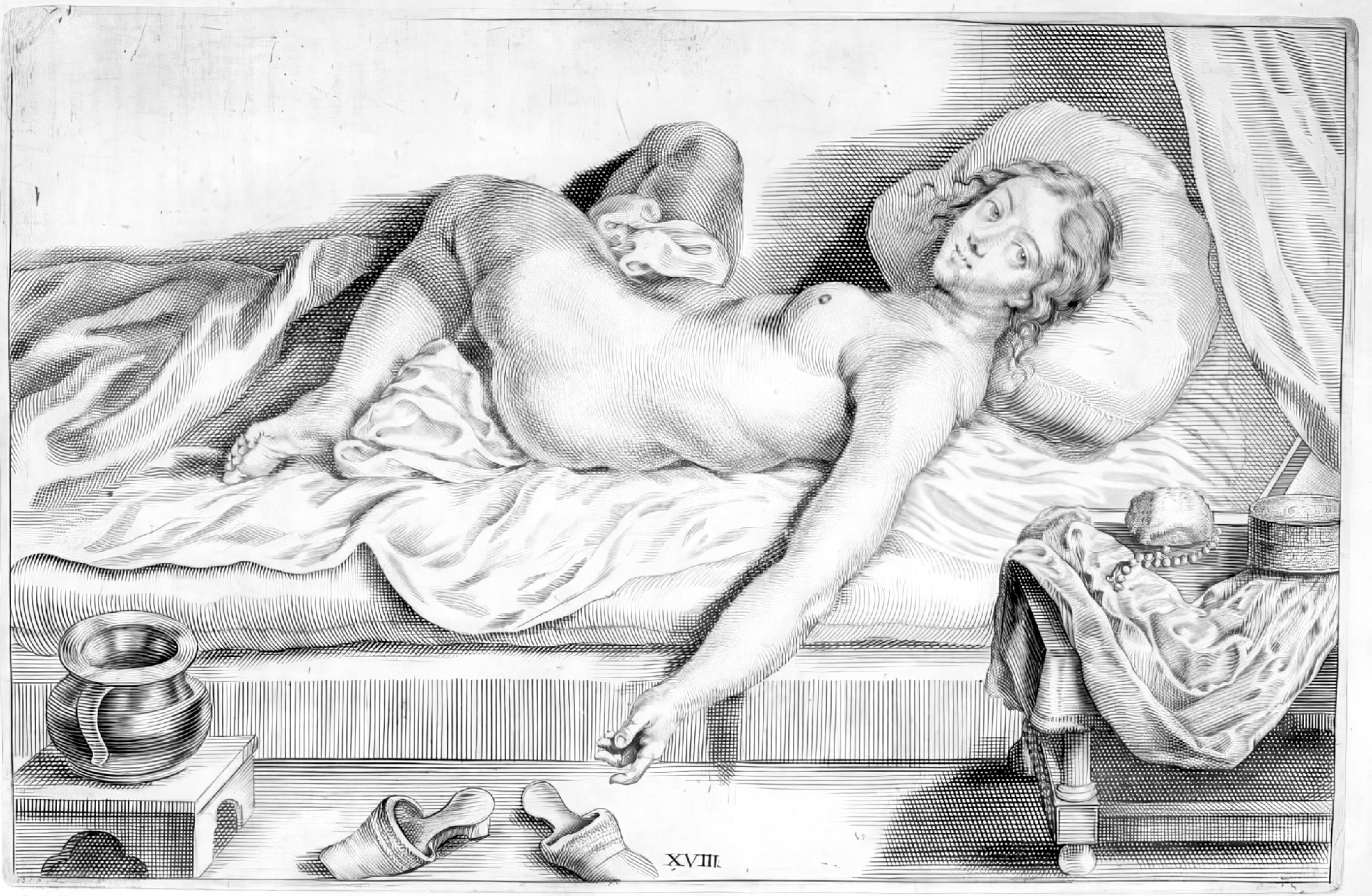
XV



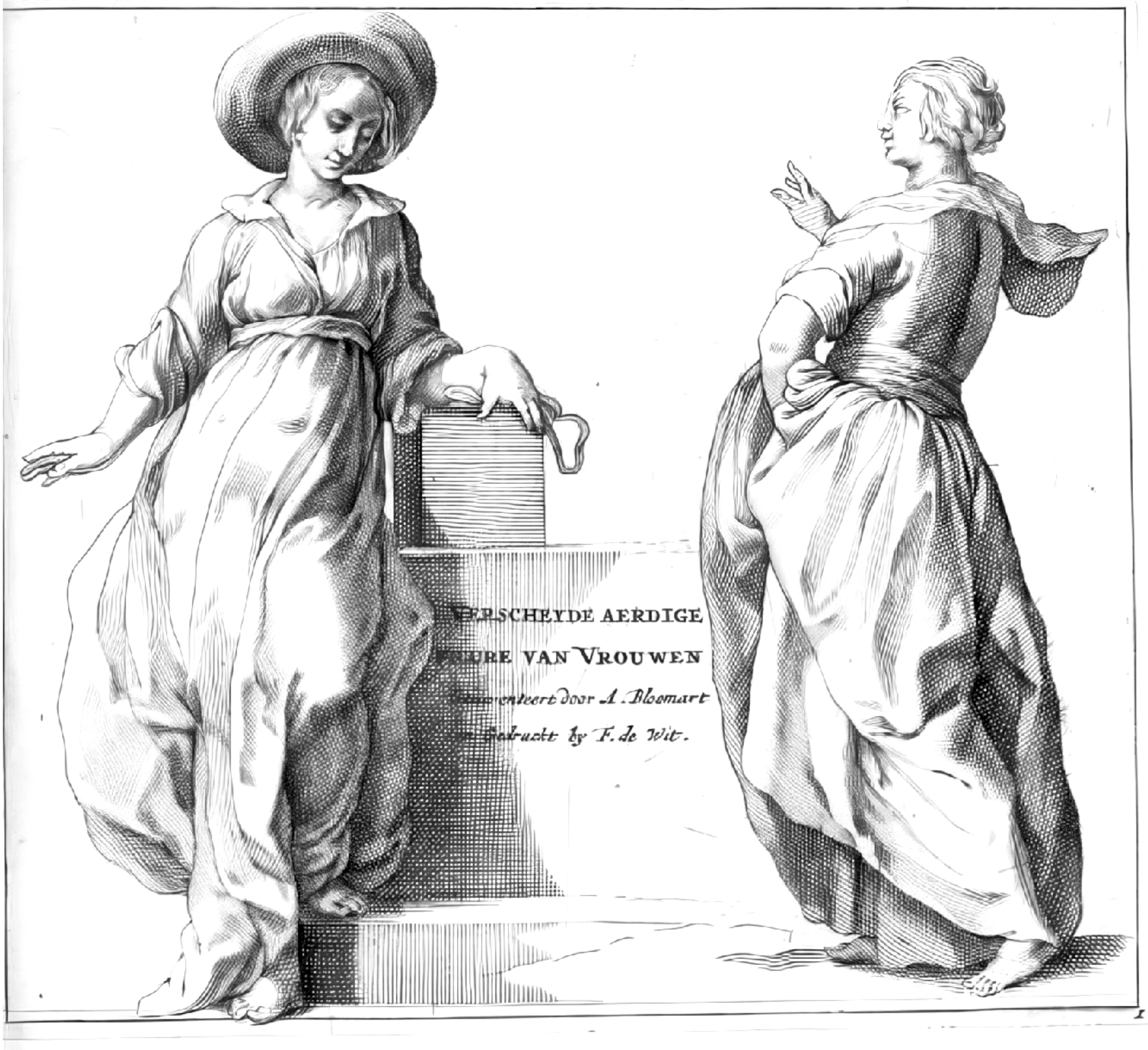
XVII

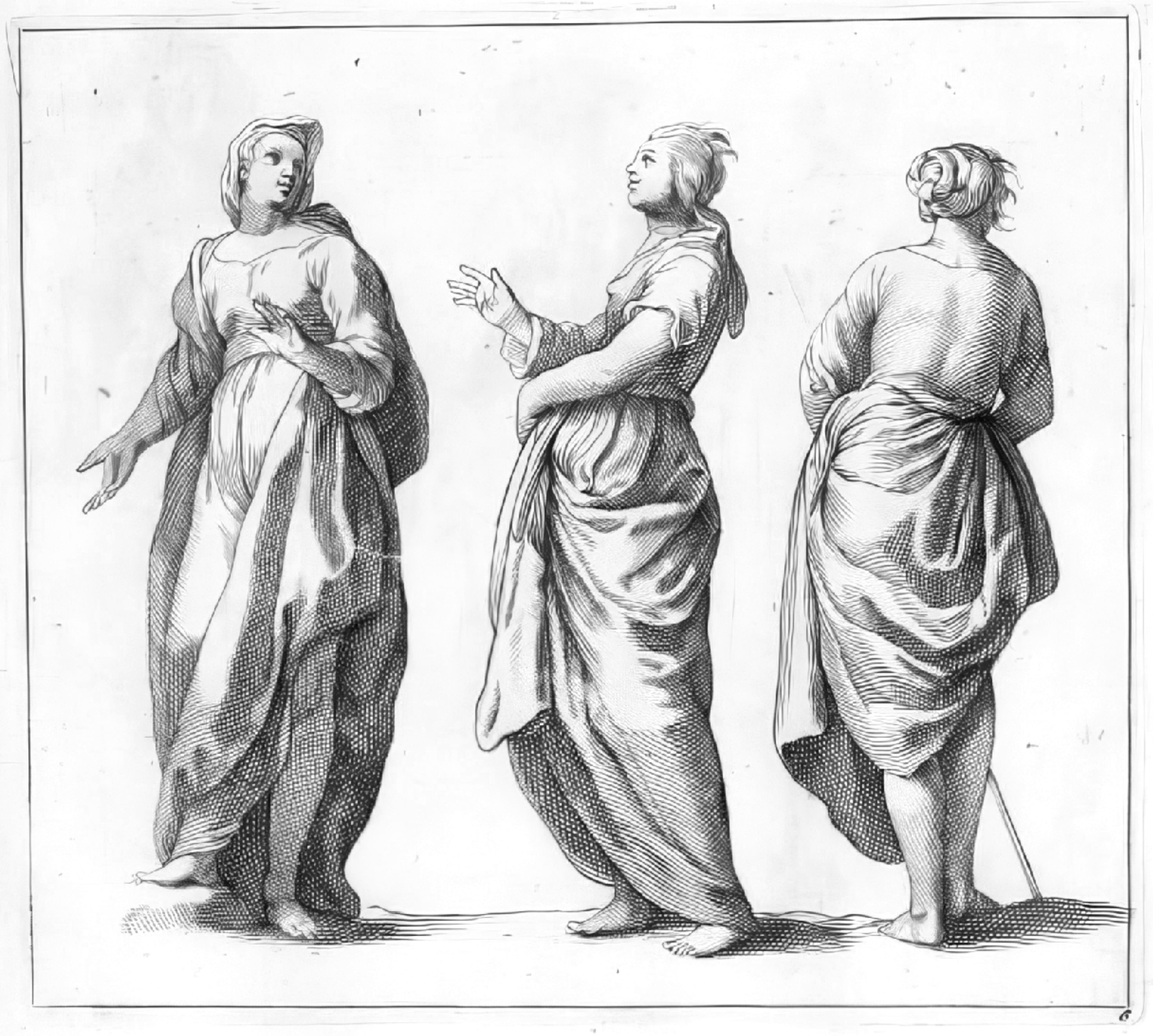


XVIII



XVIII


VERSCHEYDE AERDIGE
FIGURE VAN VROUWEN
Geinventeert door A. Bloemart
en Gedruckt by F. de Wit.
1



3·4

THE FOURTH PART of the Light in the Art of Drawing and Painting

IN WHICH IS TREATED

How with a very simple and practical method, all kinds of clothing should be arranged on figures, using a wooden model.

To the Reader

I believe, according to my opinion, that in the second and third parts I have sufficiently treated the instructions relevant to the study of this art, especially concerning the proportions and measurements of the human figure, whether nude or clothed. I consider it no less necessary to briefly describe how we should clothe the figure and why.

Since man was created without garments, which serve only to cover his shame, garments have become necessary not only for modesty but also for protection against weather and, more often today, are worn for vanity. They can also provide great ornament when worn appropriately, suiting the person's stature and enhancing appearance. This matters in our art, both in history painting and in portraiture. Therefore, I wish to show, without lengthy discussion, how figures ought to be dressed.

On the Use of the Model

Asking a living model to remain still for long periods would cause boredom and discomfort, and frequent movement would make things too difficult. For this reason, the great masters in Italy, through a remarkable practice, have invented a very useful and efficient method: to draw from a wooden manikin. Once dressed in cloth, the folds stay in place. The limbs can be adjusted via joints, turned and twisted like a living person. I have shown such a manikin below, in three positions, A, B, and C, which is adjusted with an iron key.

The Procedure

If someone wishes to draw a clothed figure, it is first necessary to make a rough drawing on coloured paper—grey, red, or otherwise toned—to establish the pose and arrange the garments: whether drapery, silk, linen, satin, or brocade. Most importantly, this should be done in a room with only one light source, preferably from the north. Without this, consistent lighting is impossible.

One must then study the drawing or model carefully, laying the garments on the wooden figure and arranging the folds to match the original drawing. Above all, it is necessary to note how the folds should flow—in order, in the form of flames or tendrils, like tree branches or waves—entering and exiting the composition with elegance.

Pay attention that folds start at main joints: the torso, knees, and elbows. Where the surface is rounded—such as the belly or back—cloth should lie flatter; on hard surfaces like the thighs and shins, folds should be more structured so that light can enter and create contrast. On the lit side of the body, use fewer folds in heavy cloth. In softer fabrics like satin or taffeta, observe how folds fall naturally at the knees, thighs, or foot joints. Sometimes they seem shaped by the body beneath; sometimes they hang lightly. Avoid confused or excessive folds. Velvet or leather can support larger folds since they only crease along the joints.

For thick cloth like that of coats or clergy robes, use large folds. For lighter garments like those of women or sailors, use smaller, ordered folds. When designing clothing, always place folds where limbs bend—at elbows and knees. As for the garments and folds on female figures, make sure they do not cling too tightly to the body—especially around the chest—and do not allow them to hang too heavily or stick unnaturally, as that would appear graceless.

Above all, aim for folds that are as square as possible, to create clear lights and firm shadows. I believe this sufficiently explains the subject. Let us now speak of the manner of drawing.

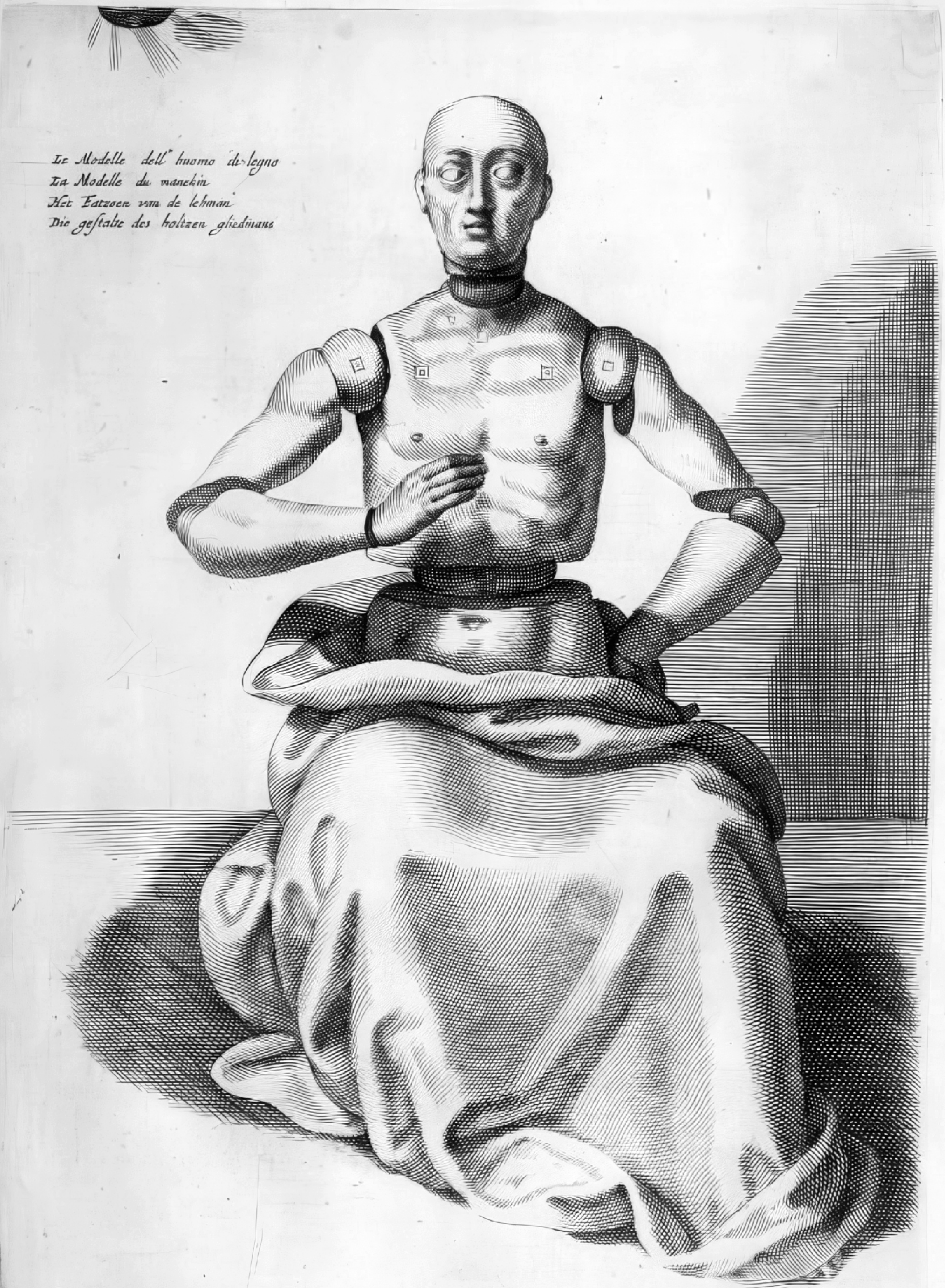
The Drawing Process

Use a kind of toned paper—grey, red, or slightly darkened—or prepare it with a sponge using a mix of smoke-black and ink, or red root pigment. Set the model before you in steady light, not too high nor too low. Roughly block in the figure at the size you want with a piece of charcoal.

Then, using the model, mark the main folds cleanly with charcoal, imitating the figure as closely as possible. Ink over your drawing to preserve the charcoal lines underneath, then go over the lines again lightly with pencil. Add the principal shadows with pencil, without using water. Then take chalk to whiten where the light hits strongest, as shown in my printed colour example.

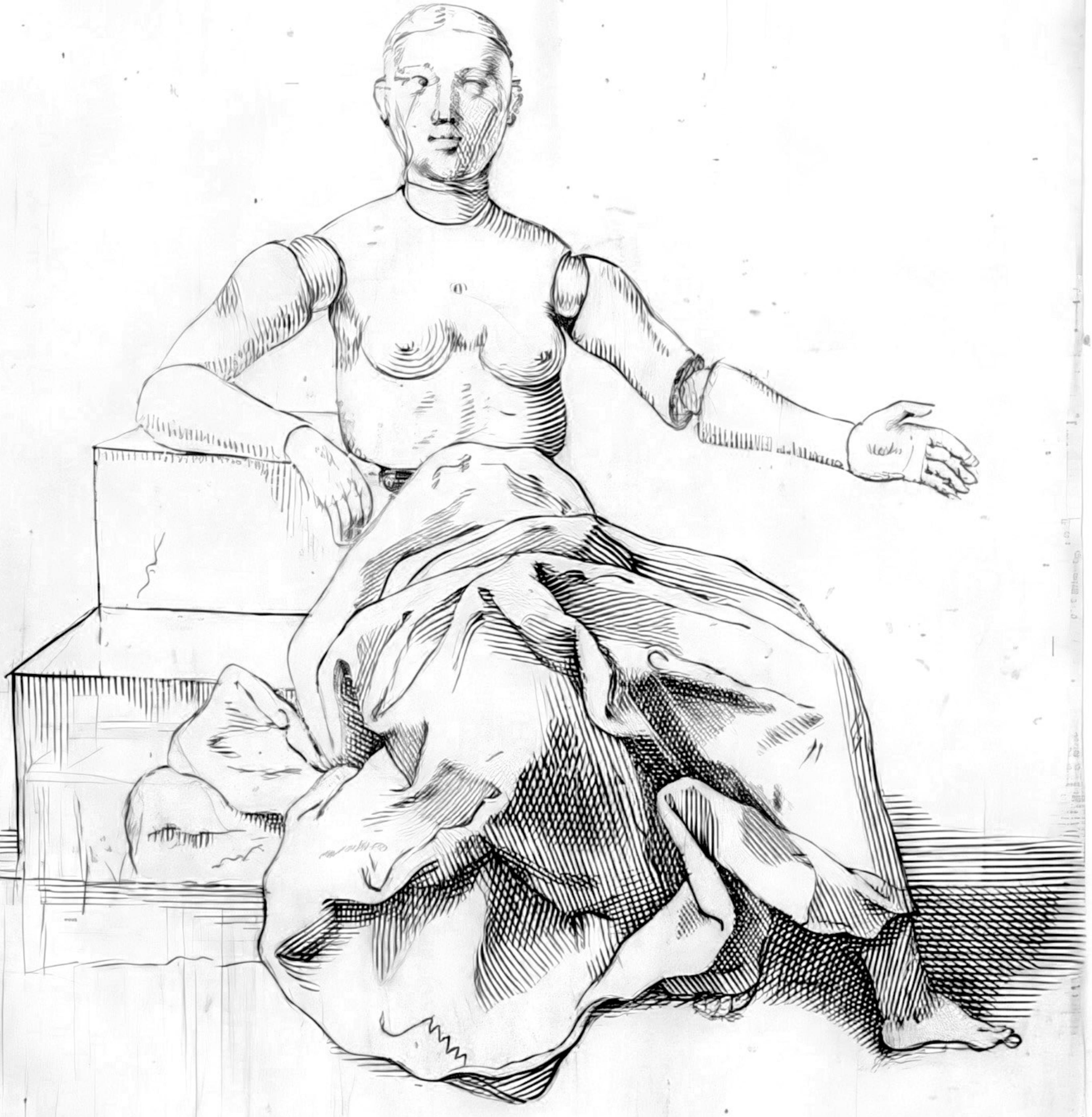
To soften transitions, take a burnt brush or soft sponge over charcoal and blend your drawing so that the colours unify. I believe this will suffice for the instruction of youth.

Le Modelle dell' huomo di legno
La Modelle du manekin
Het Fatzoen van de lehman
Die geſtalte des holtzen gliedm̃ans

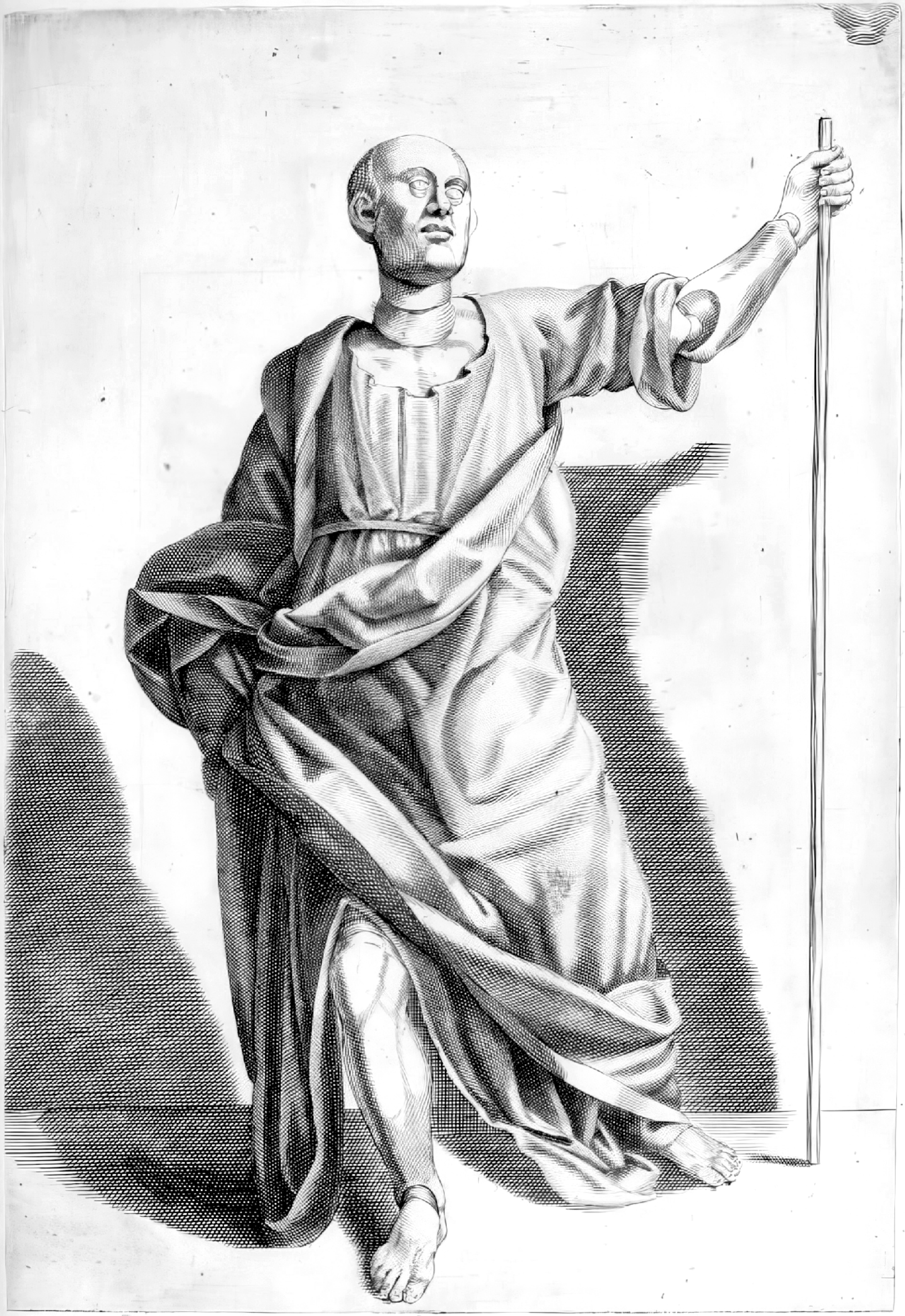


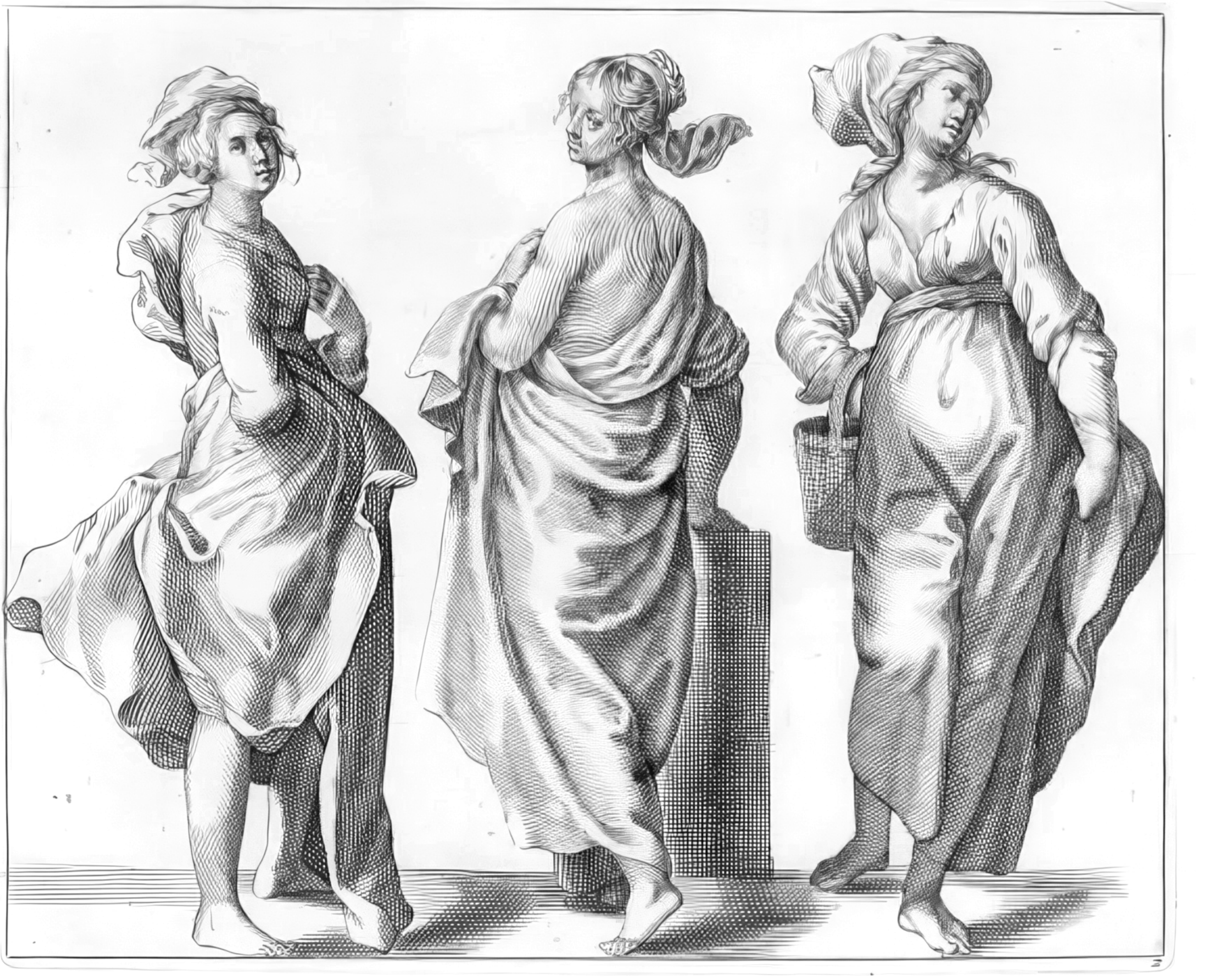
I

Erſchitze de paam d. A. Blom
un Ebauſchement de drap d. A. B.
Een ſchrabbey van een laecken v. A. B.

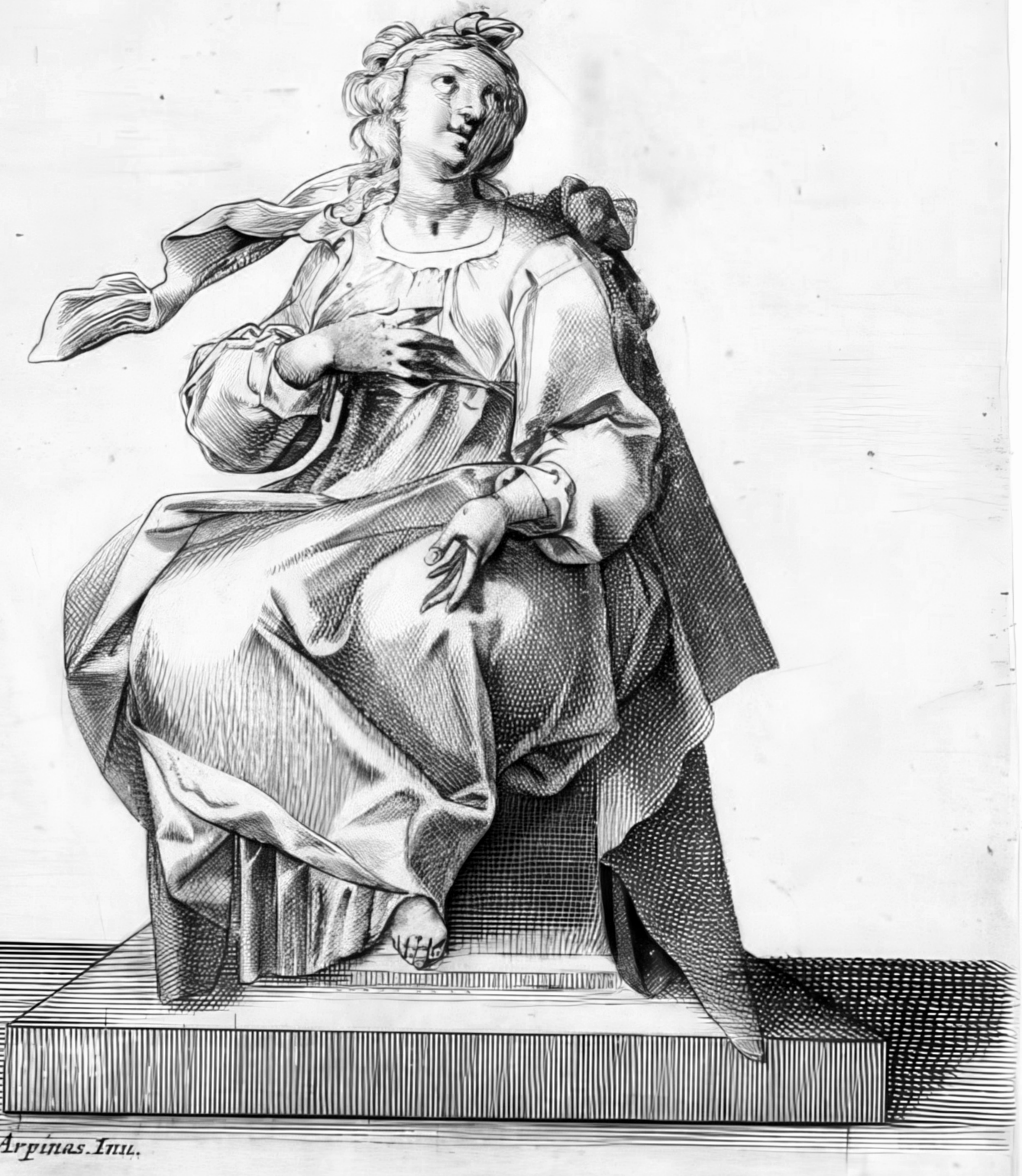


II

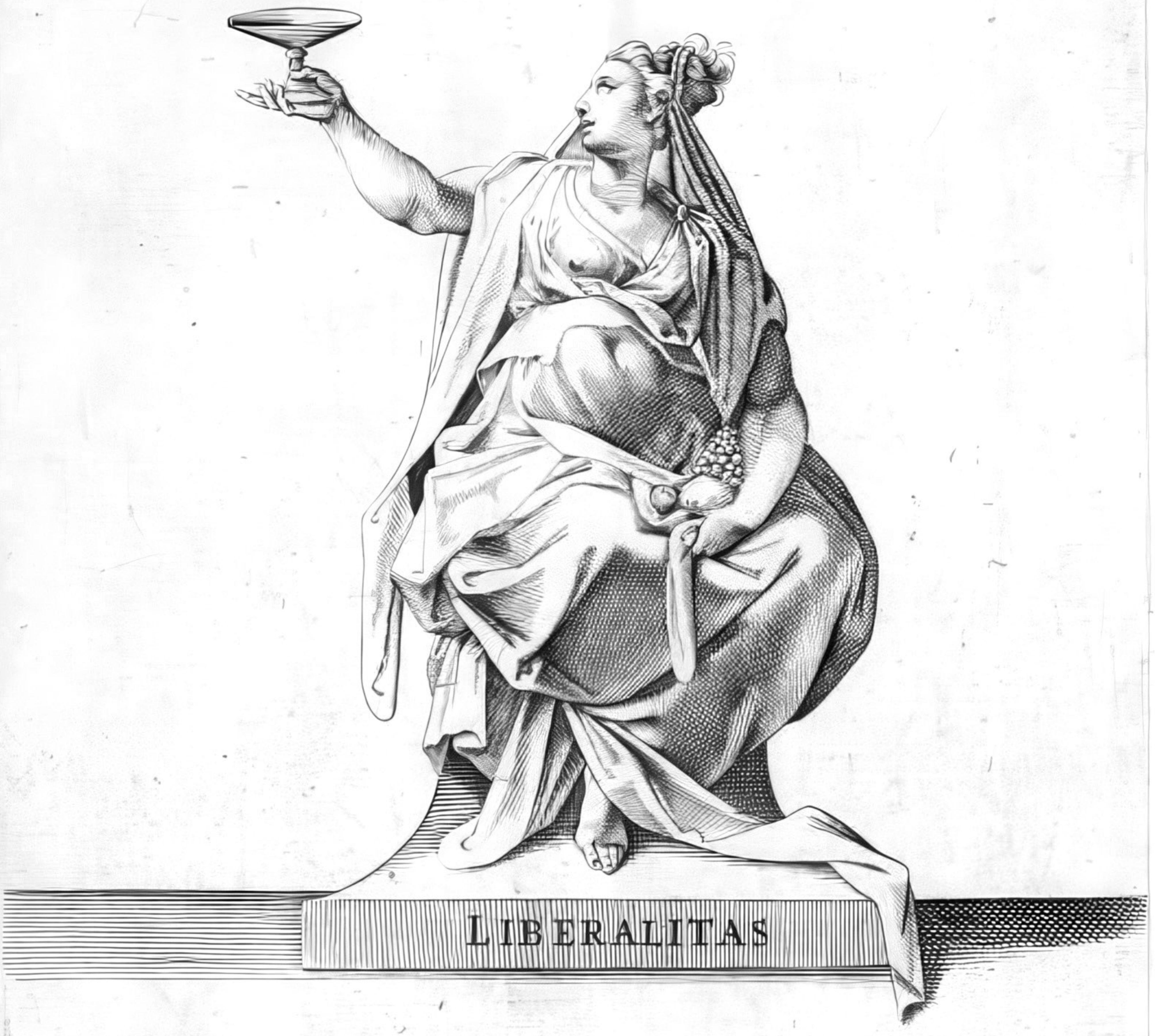




19

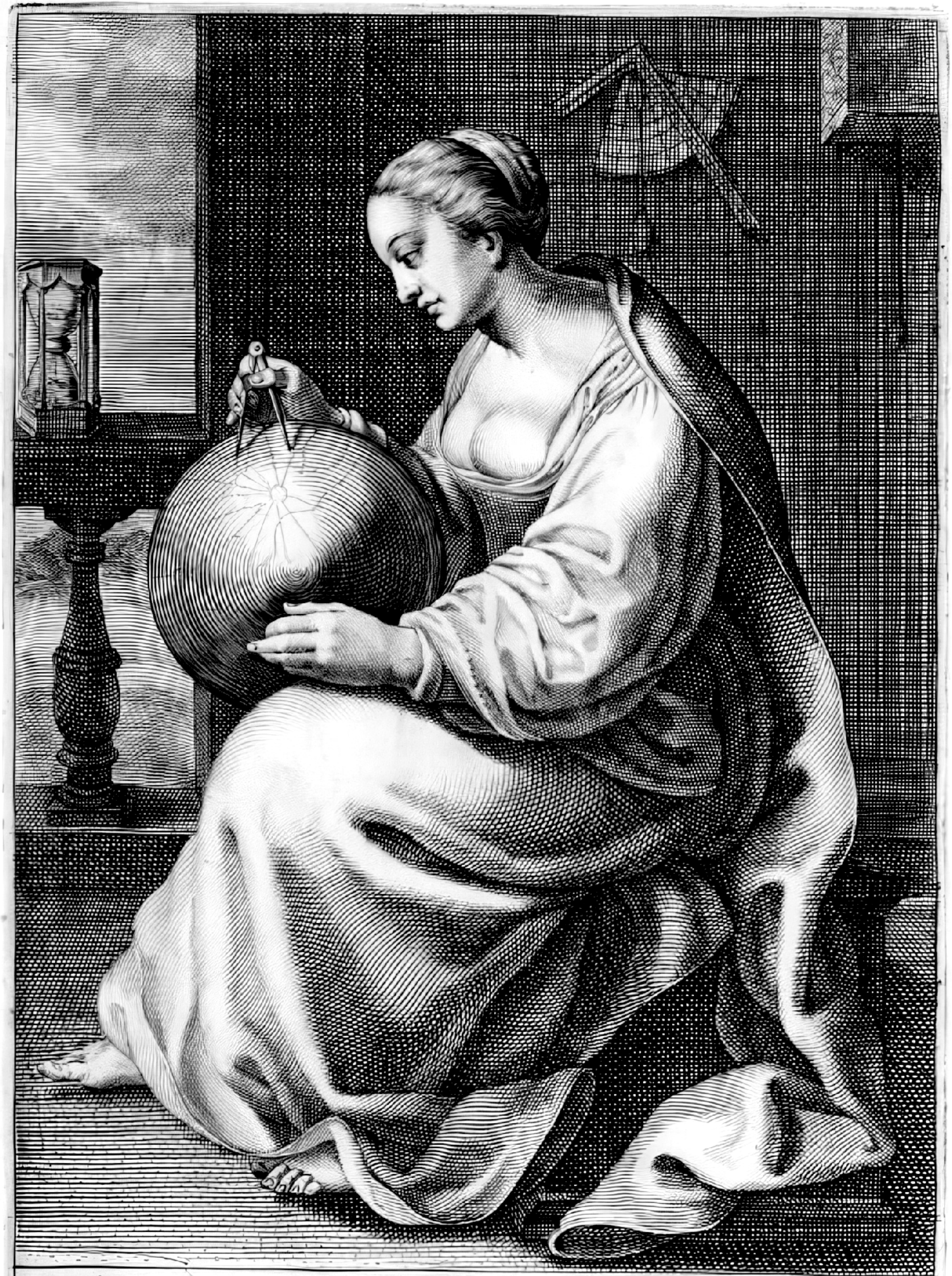


Ioſeph Arpinas. Inu.

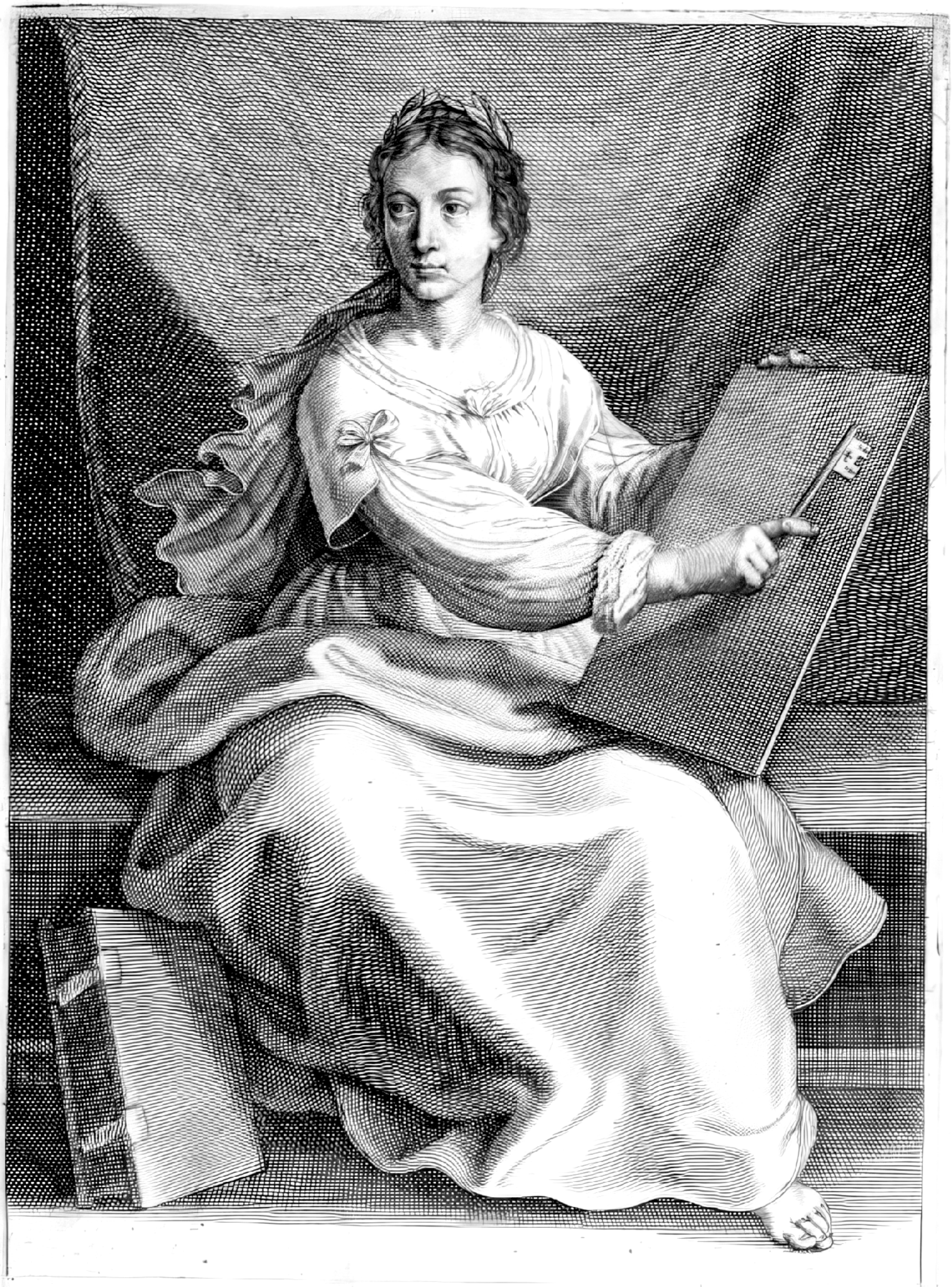

LIBERALITAS

Roma nel inventione del Ioſep Arpin

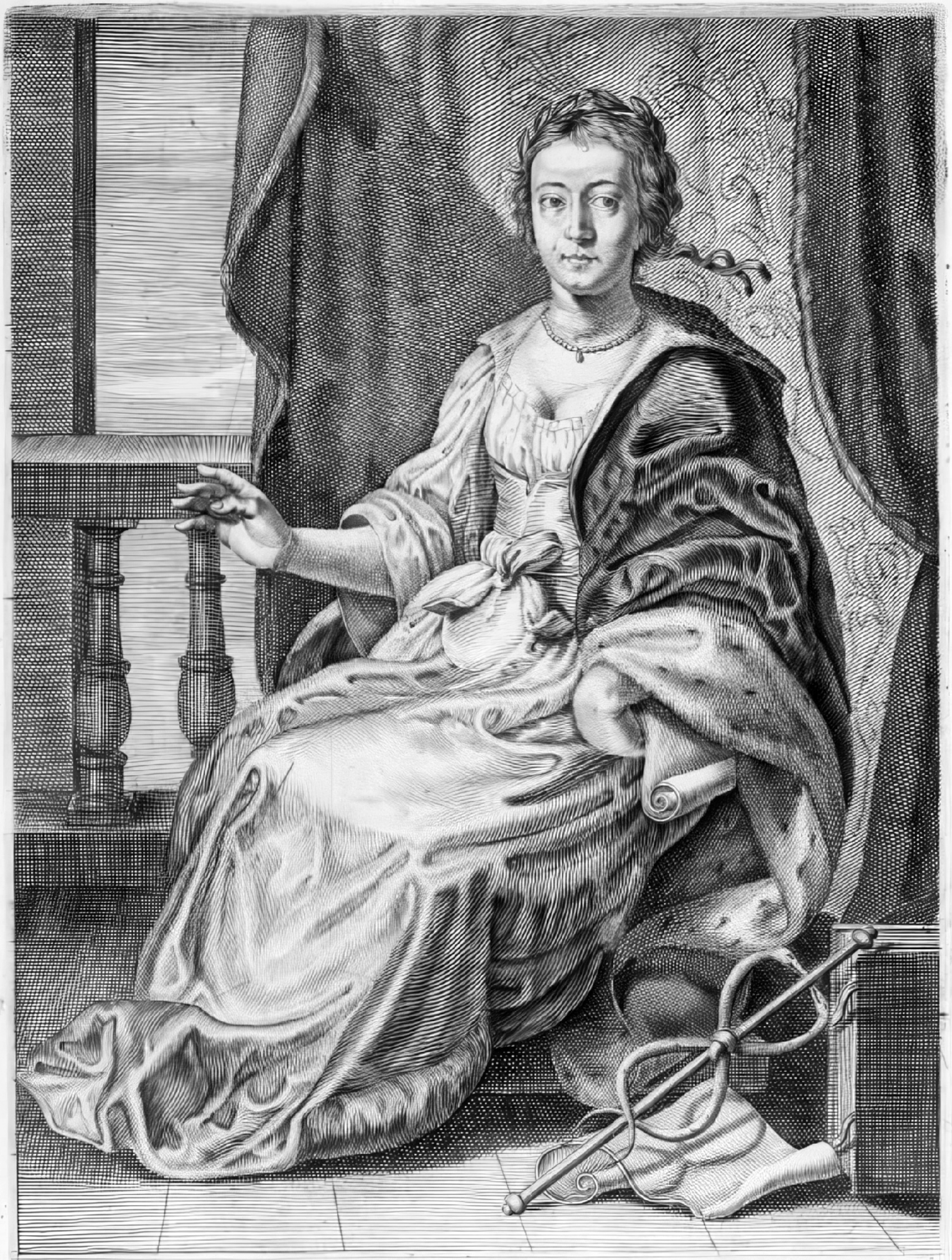
VI



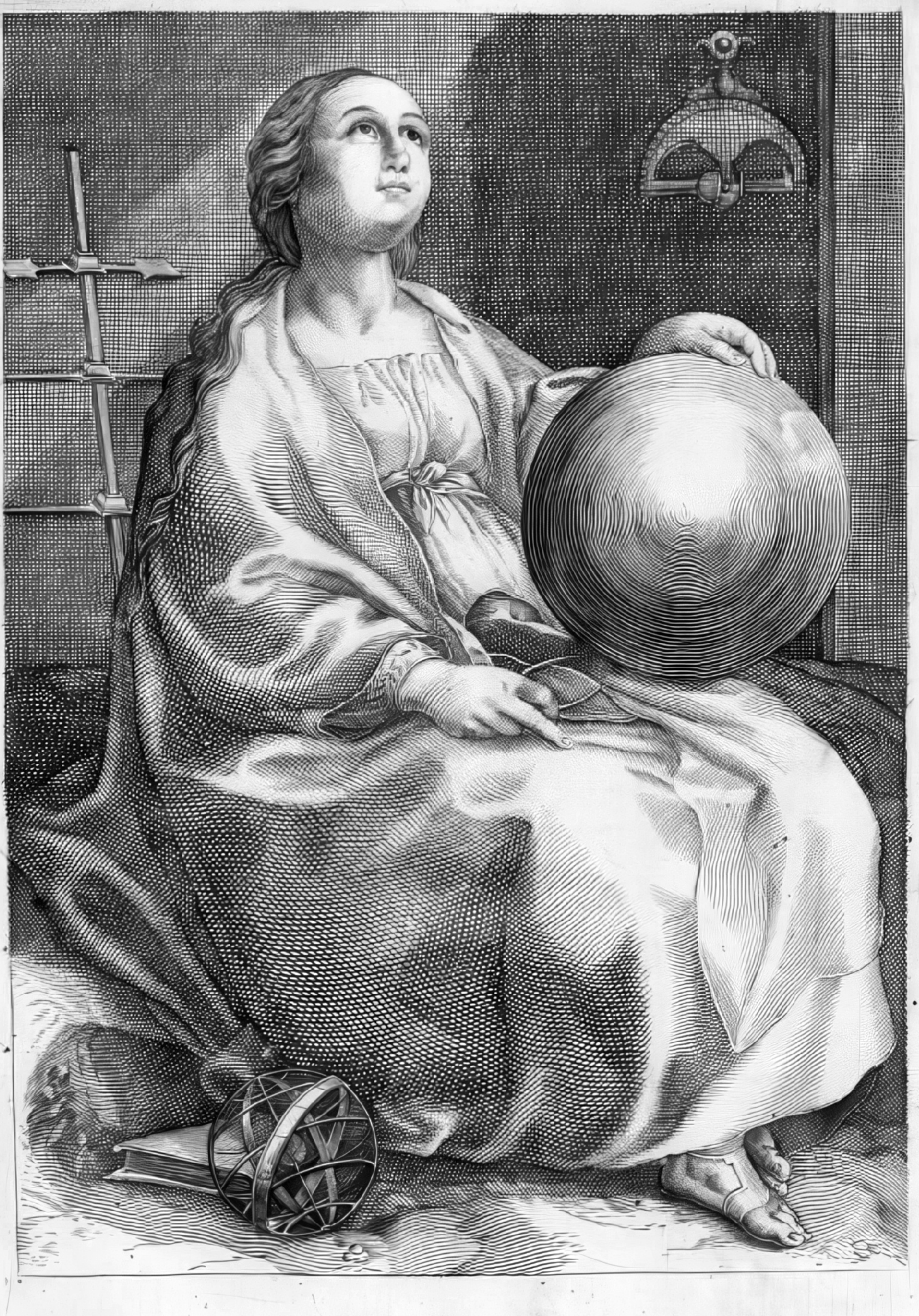
VII



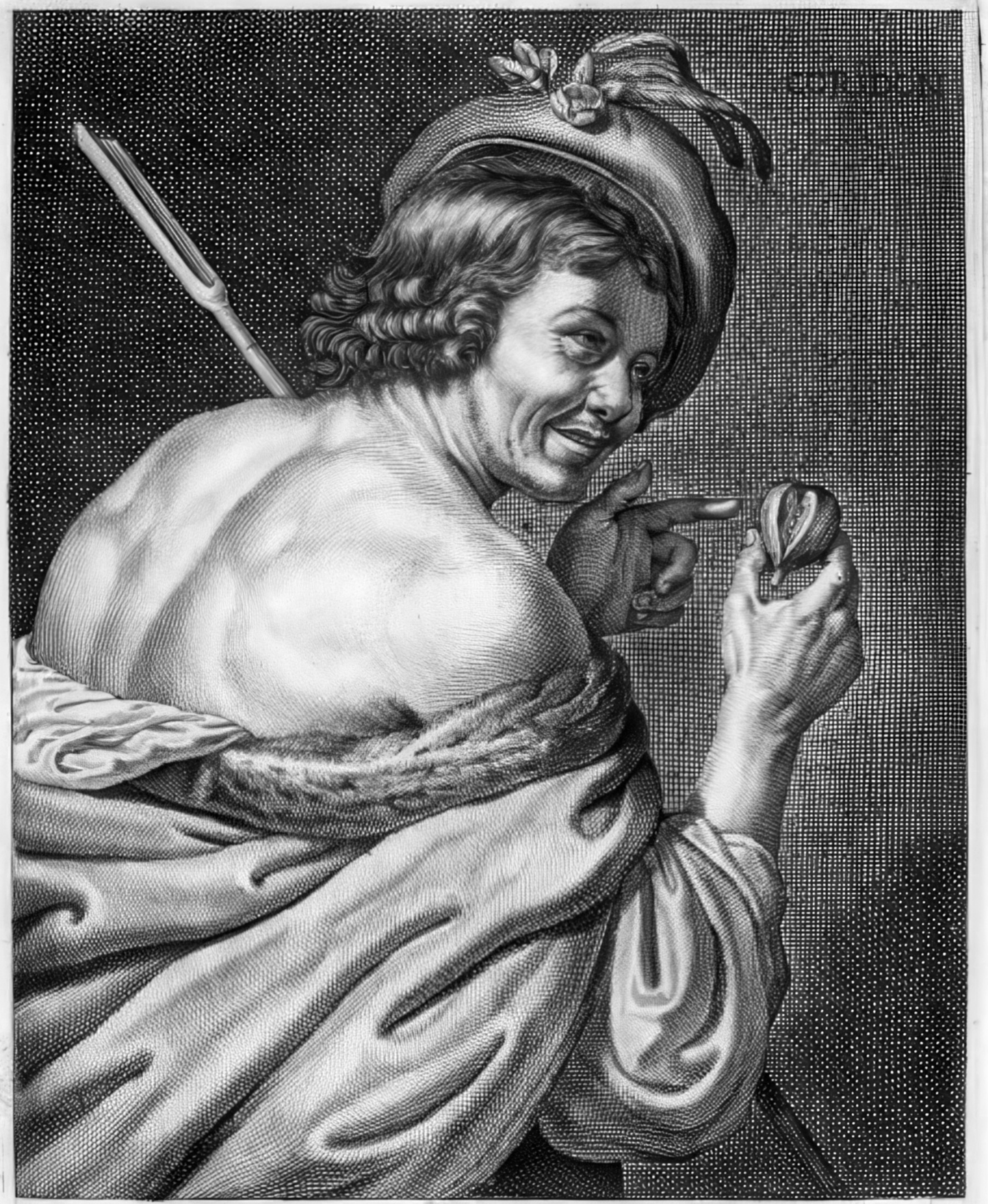
VIII



IX

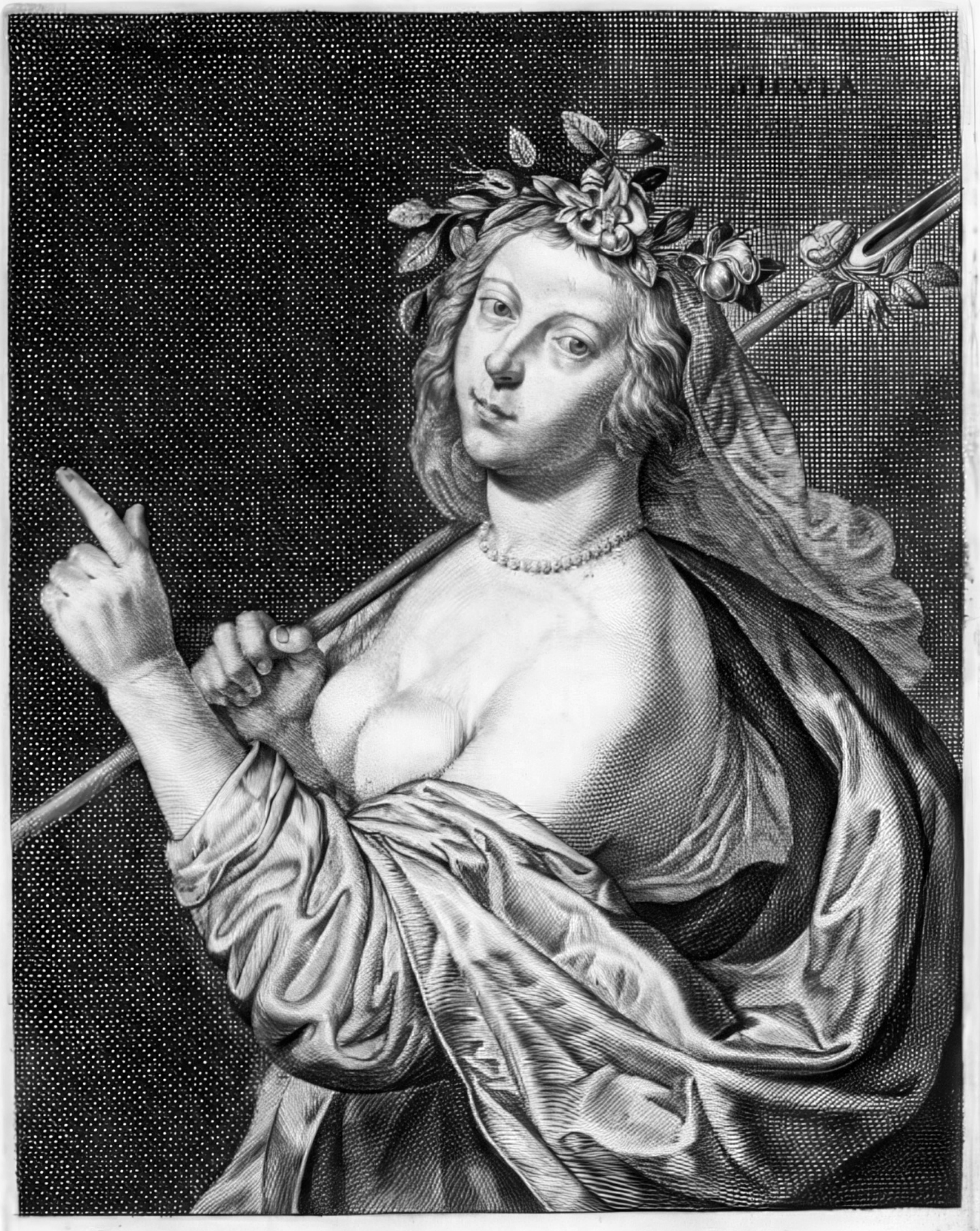


X



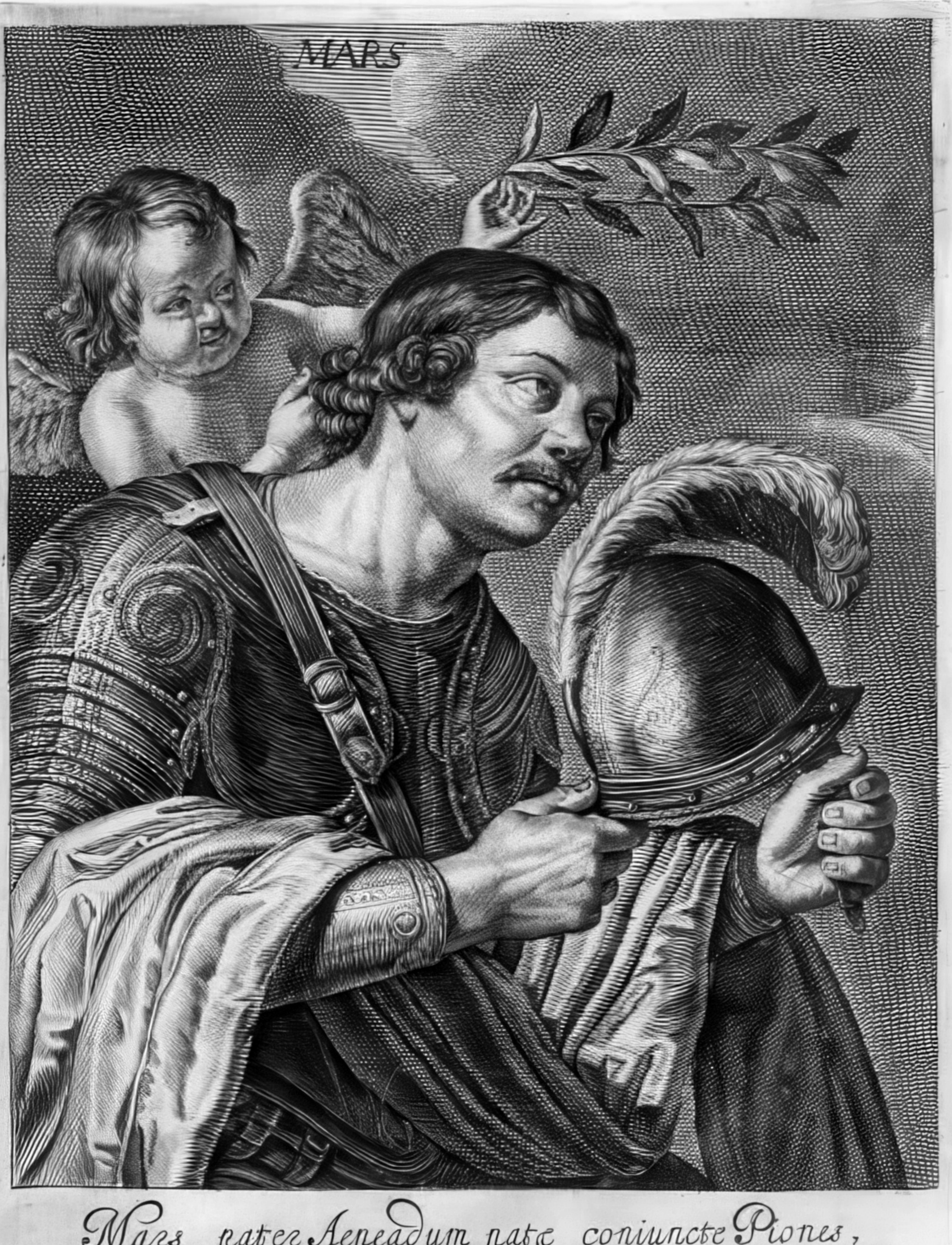
Tu mea Flora nites, et ſunt tua lumina Solis
Inſtar, quæ flammis frigida corda foves.

P. byler. pinxit XI C. par. excudit



Ruſtica tam non ſum, quin me Coridontis amores
Tangant, ſic flammis vrbe amata meis.

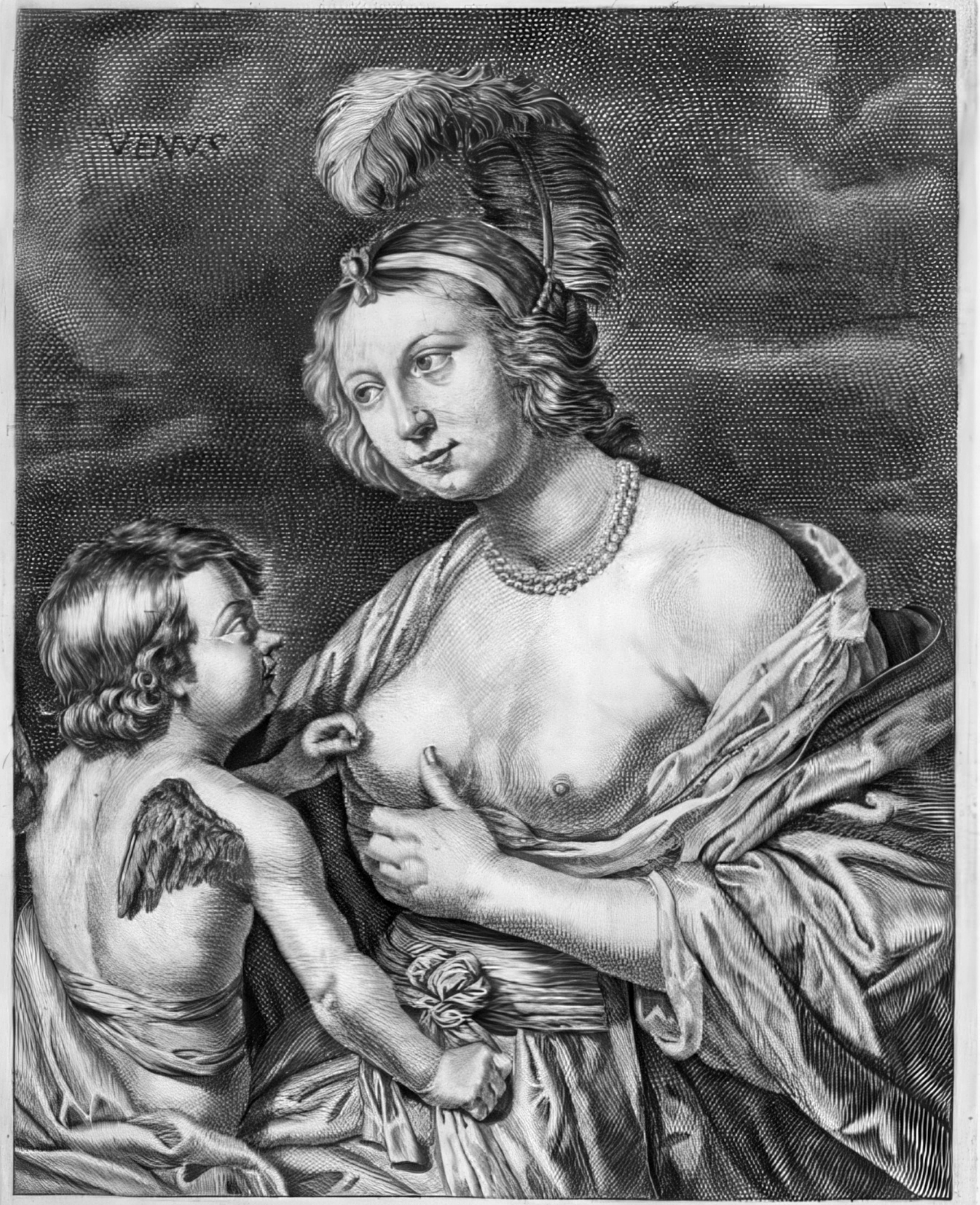
J. Lyſter pinxit · XII · Gaspar excudit



Mars pater Aeneadum natæ coniunctæ Piones,
Cur ferri oblitus contraria ſuscipis arma.

J. bylert. pinxit.

C. de pas excudit.

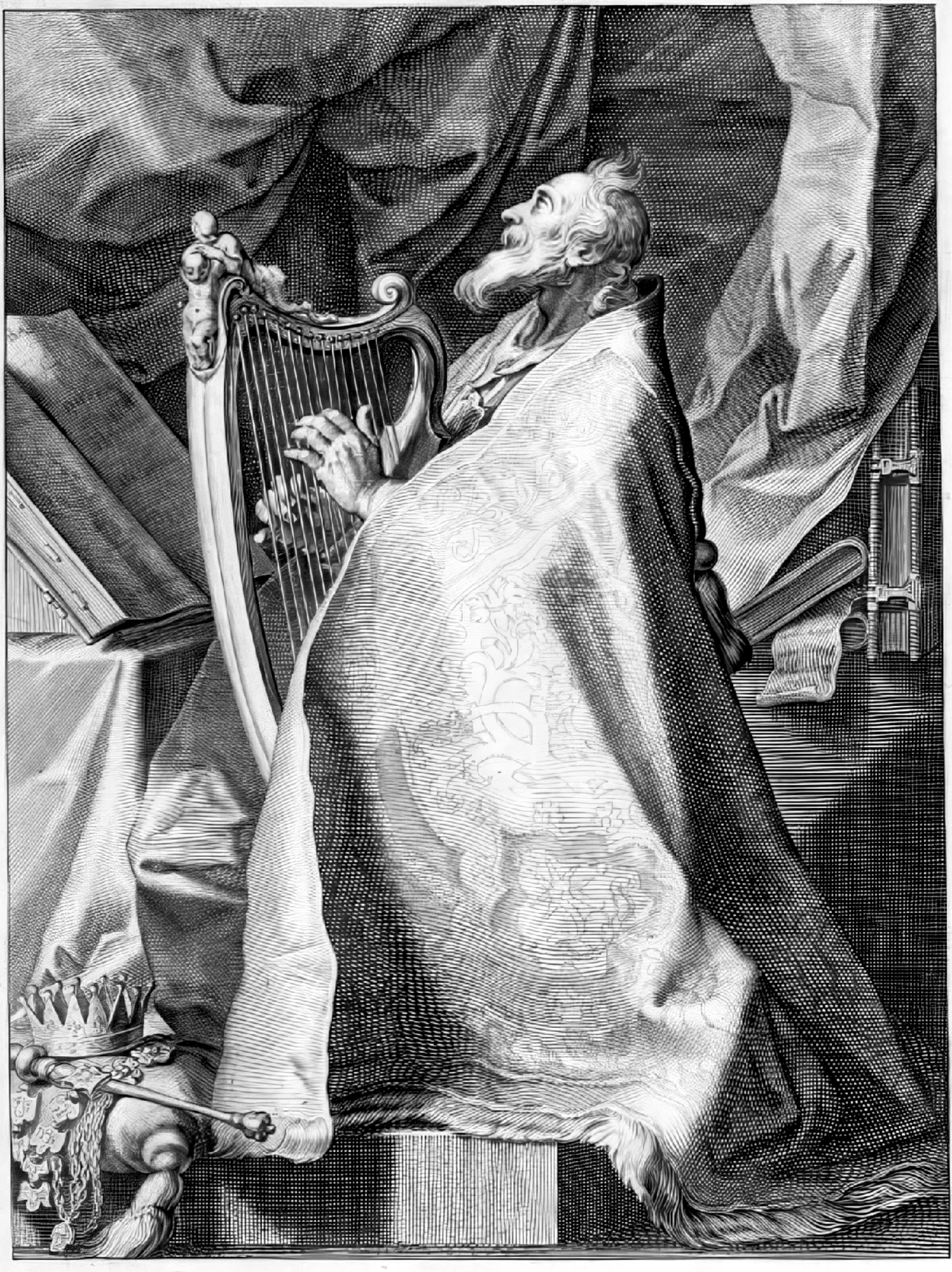


Continuá mortale genus ne cæde periret,
Arma dedi dulci lincta liquore VENVS.

J. bylert pinxit

XIIII

C. Jans. excudit

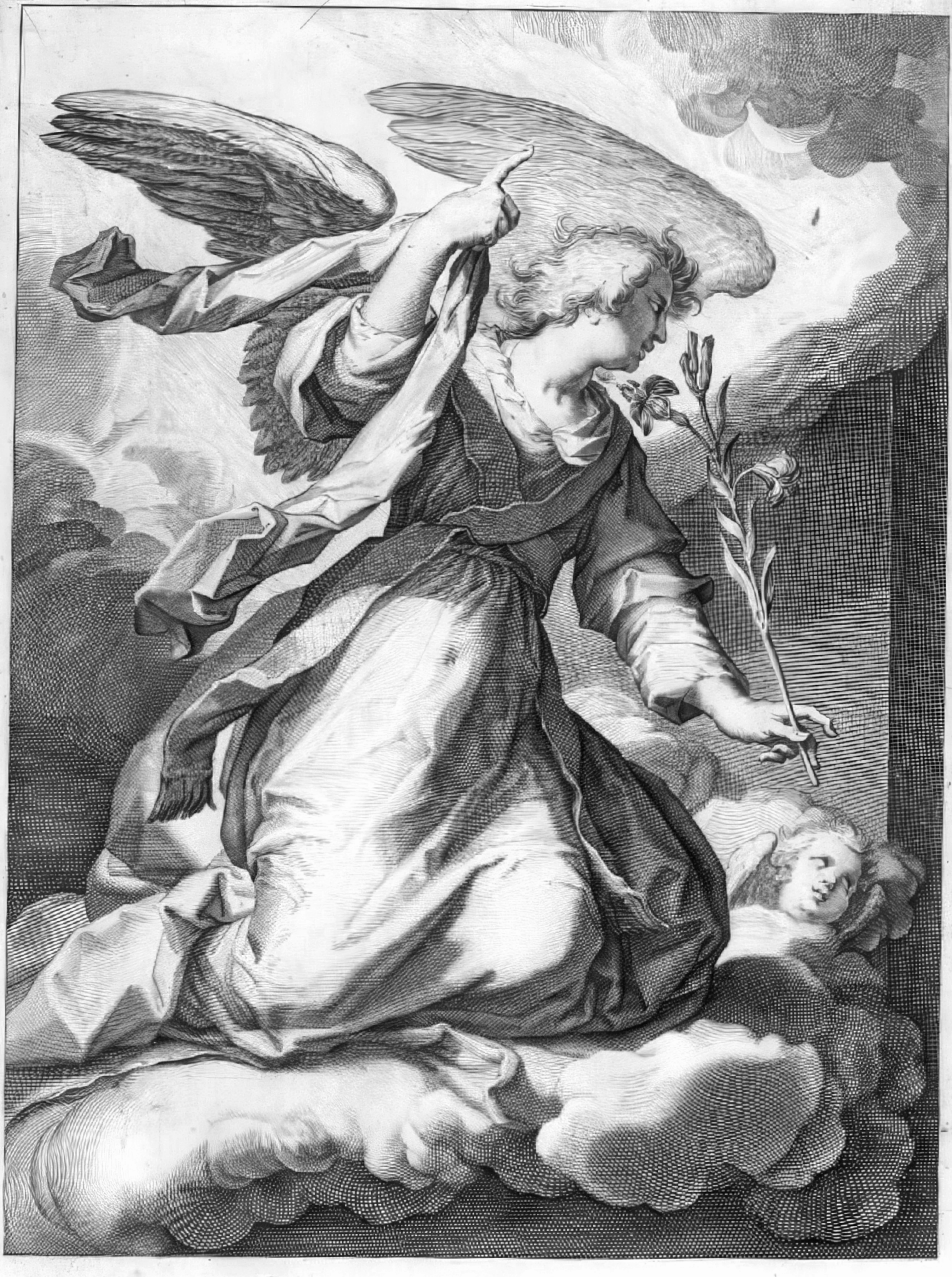


A. Bloemaert
Inuentor

Psallite Deo nostro psallite: psallite
Regi nostro psallite. Quoniam Rex Omnis
Terre Deus: psallite sapienter. Psal. 46.

Guilh. Pass fecit
Cum priuil. du
Roy treschretien
Crisp. Pass ex.

15

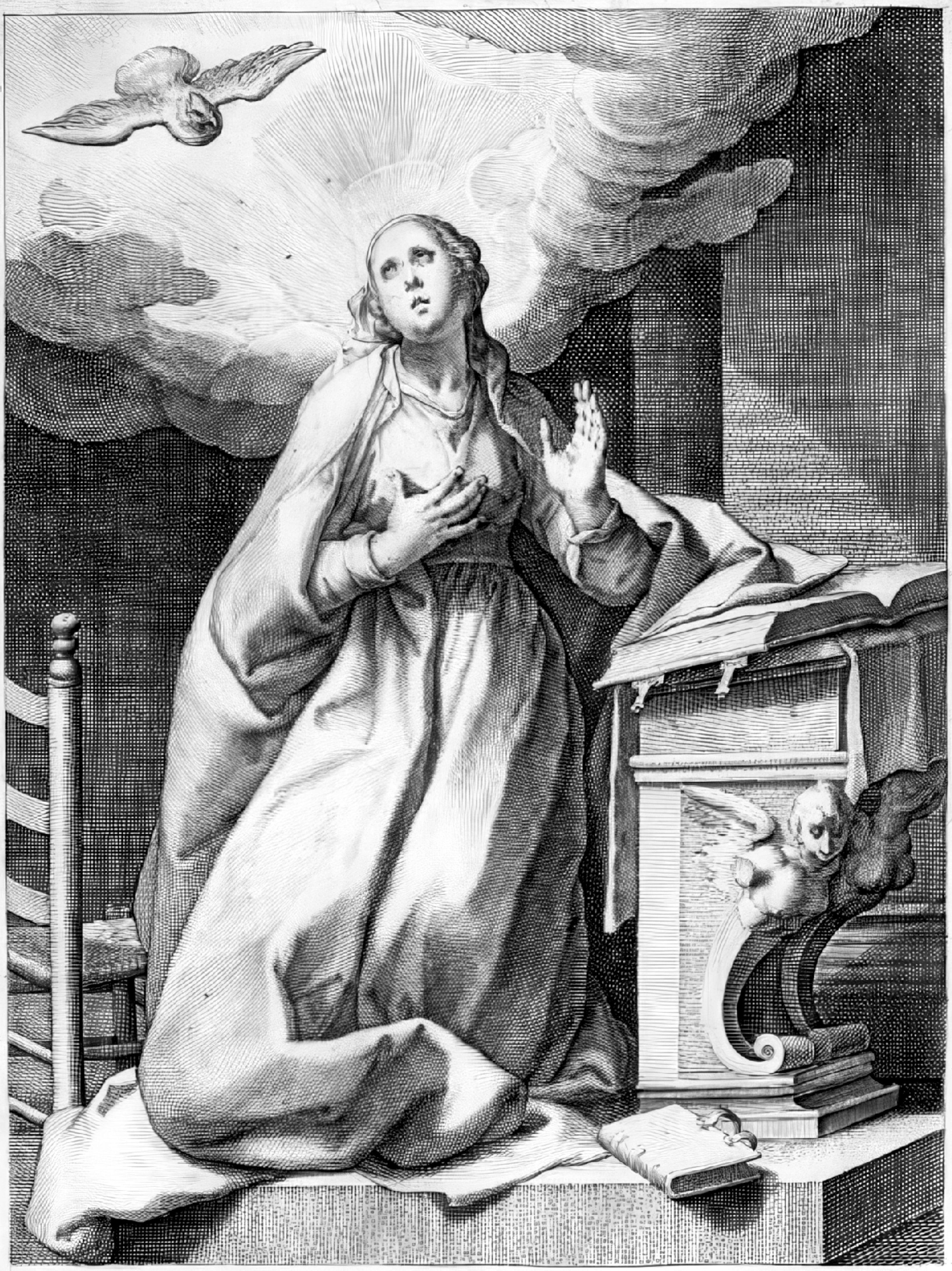


Aue gratia plena Dominus tecum:
benedicta tu in Mulieribus. Lu. 2

A. Bloemaert
Inuentor

Guil. Pass. Fecit
Cum Priuil. du Roy
treschretien

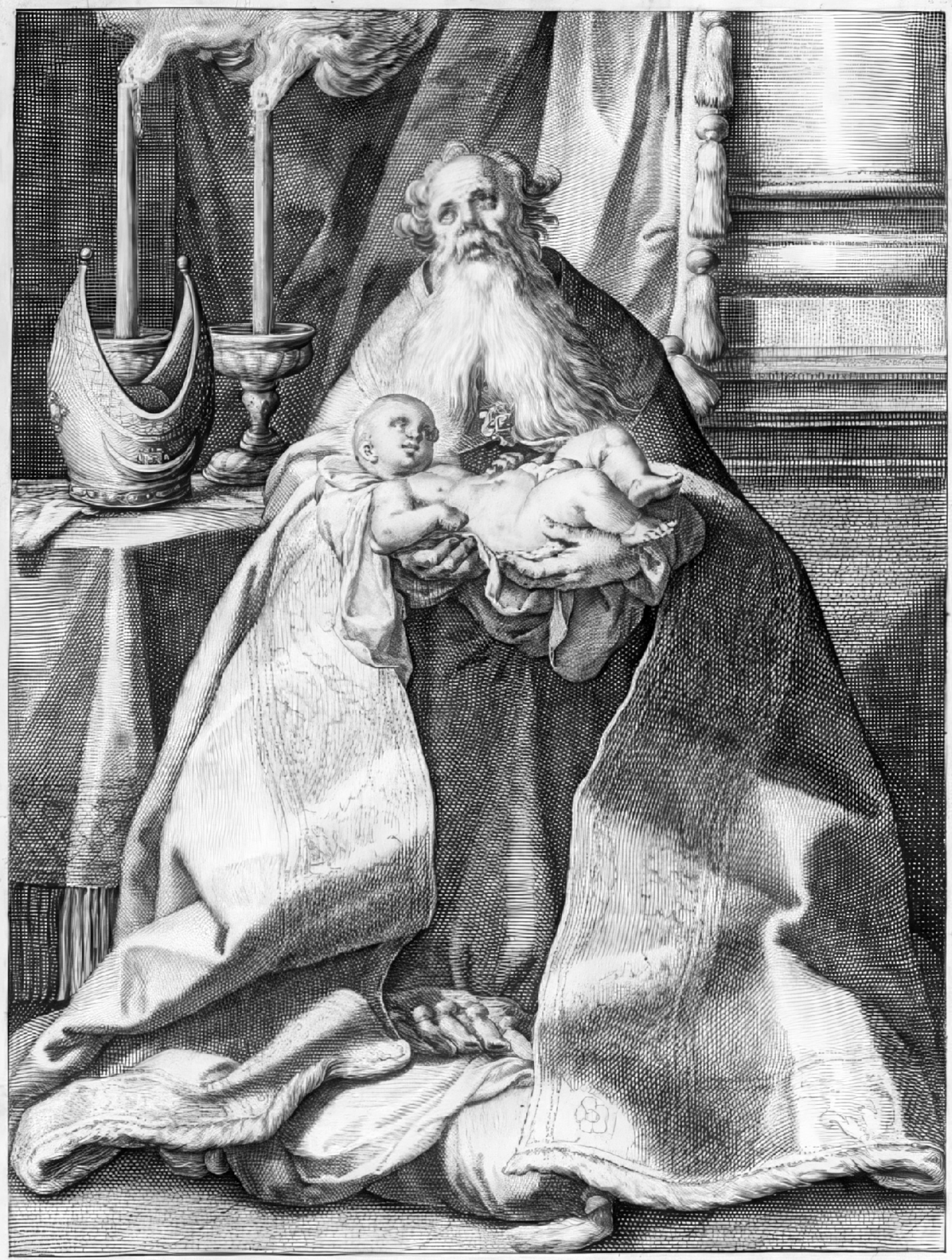
Crisp. Pass. ex. 16



Magnificat aīa mea Dominū et exultauit
Spirit' meus in Deo ſalutari me
Quia reſpexit Humilitatē ancille sue ecce ēni
ex hoc beatā me dicēt oēs generationes &c. Luc. j.

A. Bloemaert
Inuentor

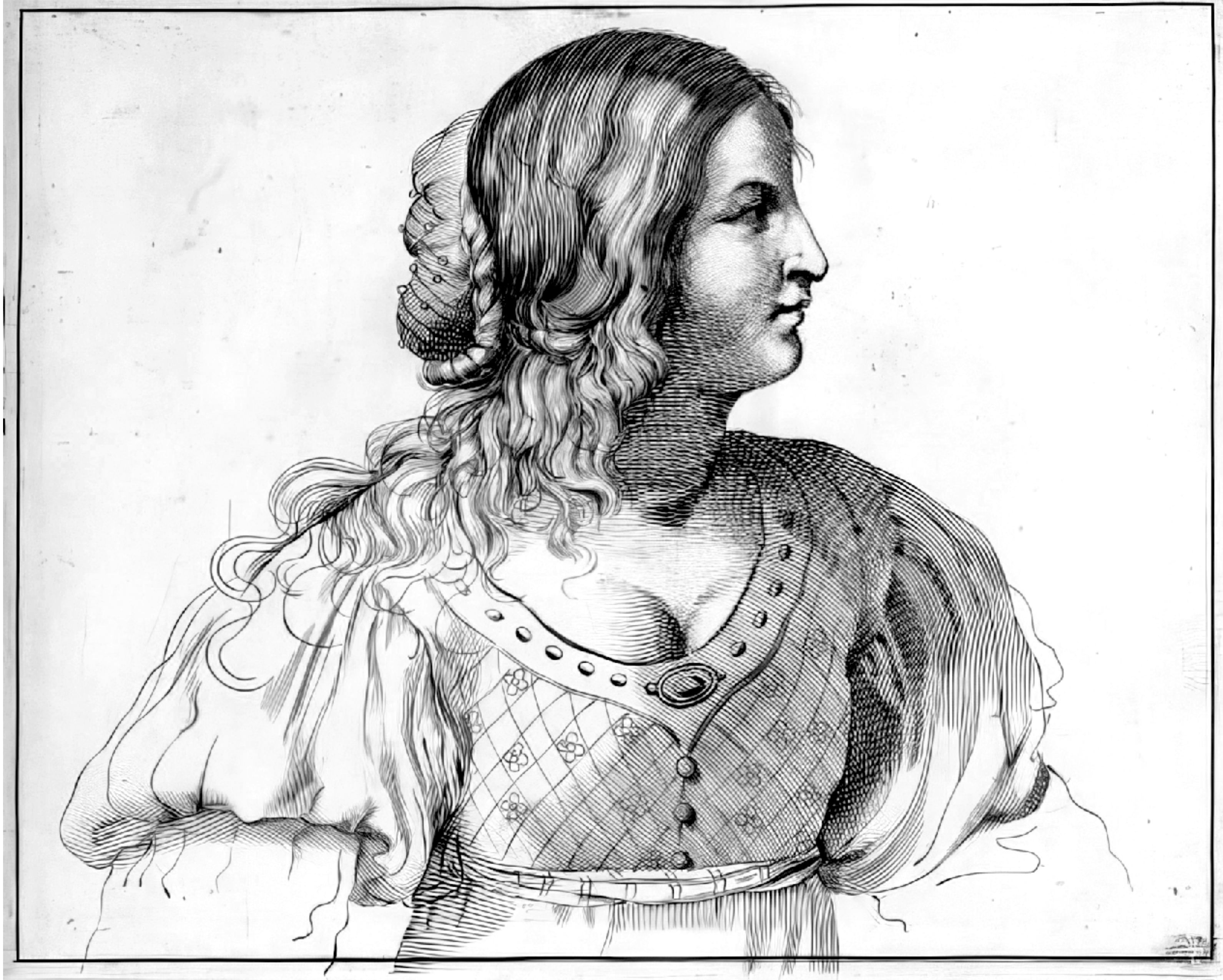
Criſp. Paſs. Fecit
et ex.
Cum priuil. du Roÿ
treschrestien

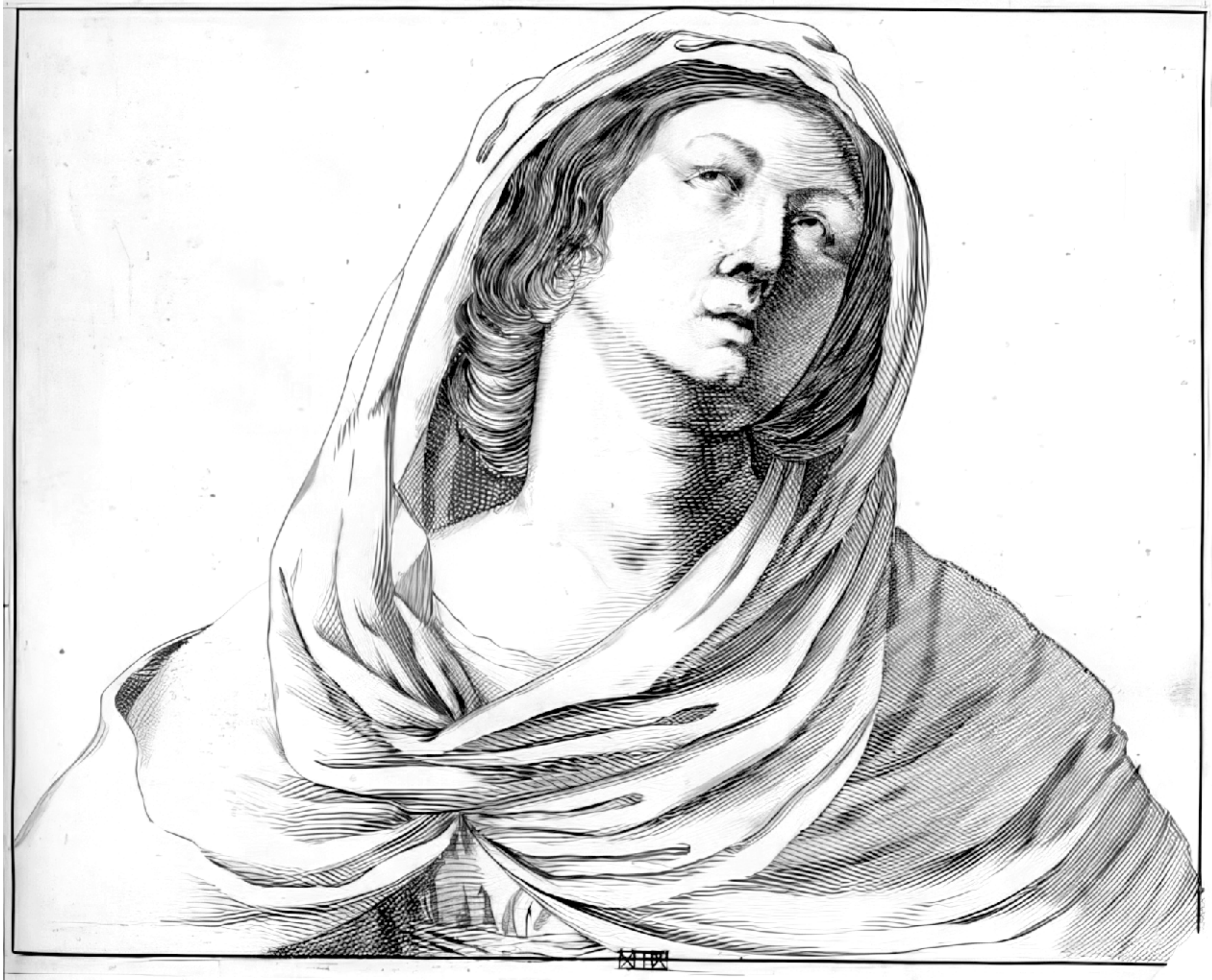


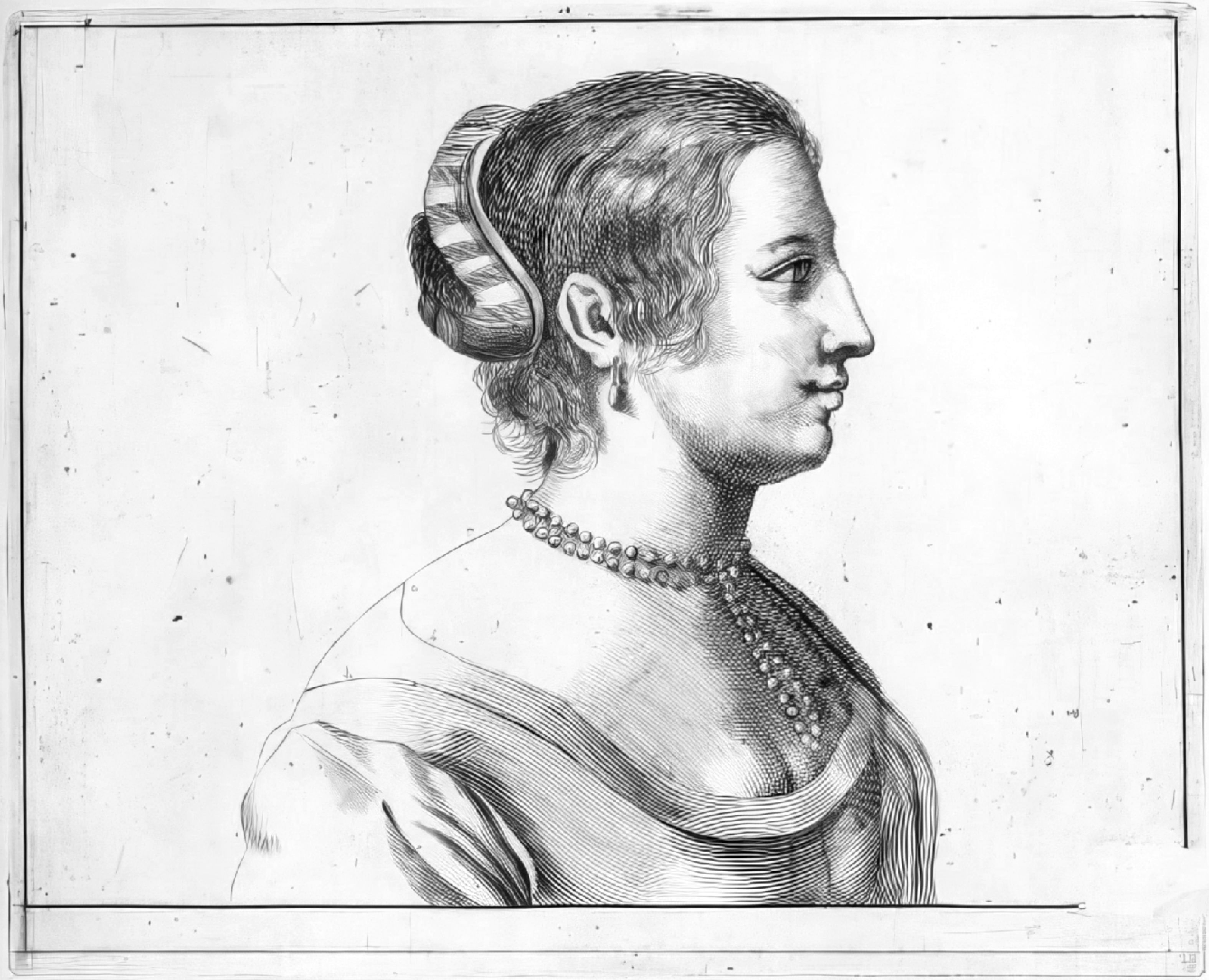
Nunc dimitis Seruum tuum Domine secundum
verbum tuum in pace luc 2

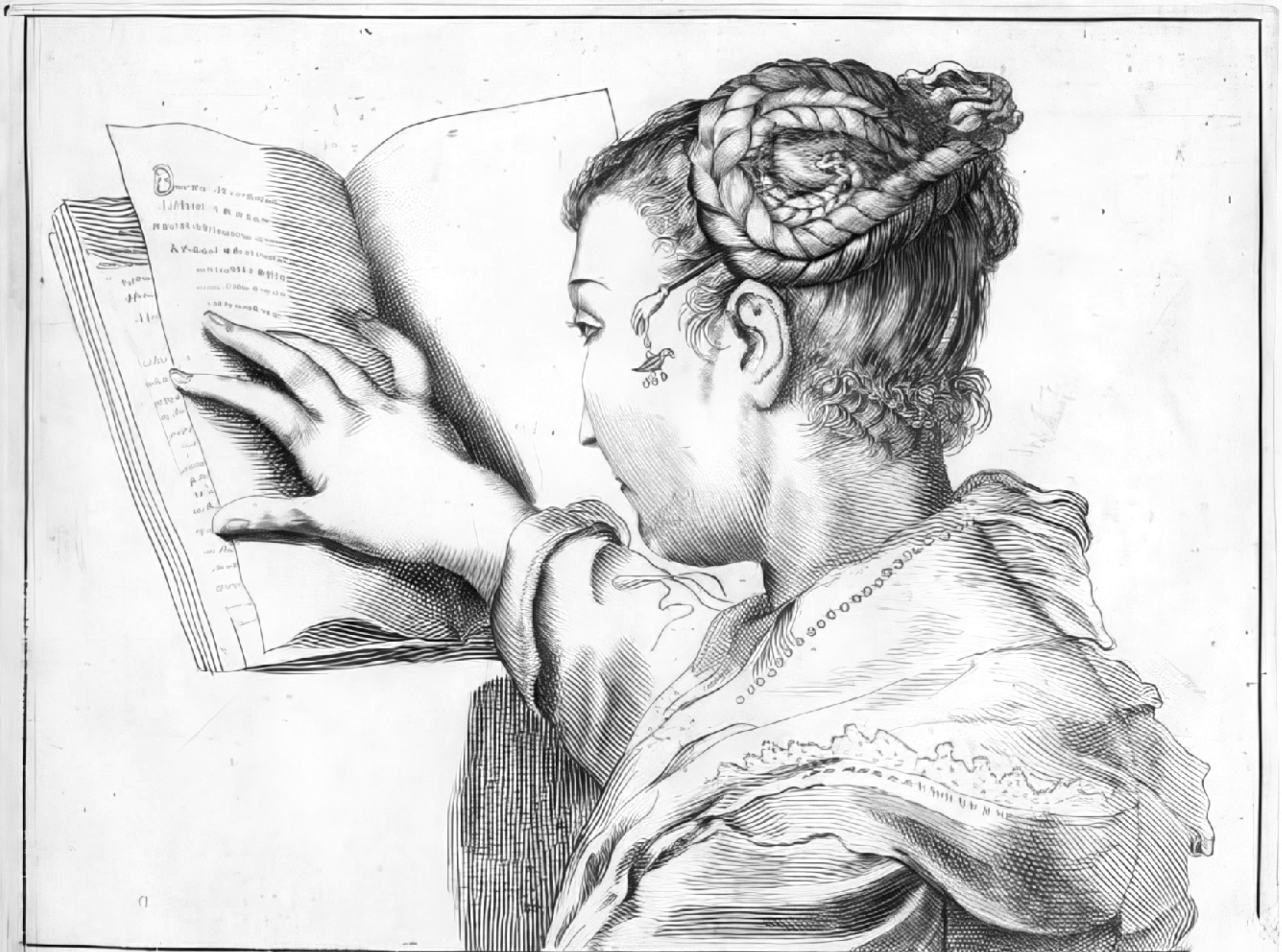
A Bloemaert Inuentor. Criſſe. Paſs
fecit et exc

18



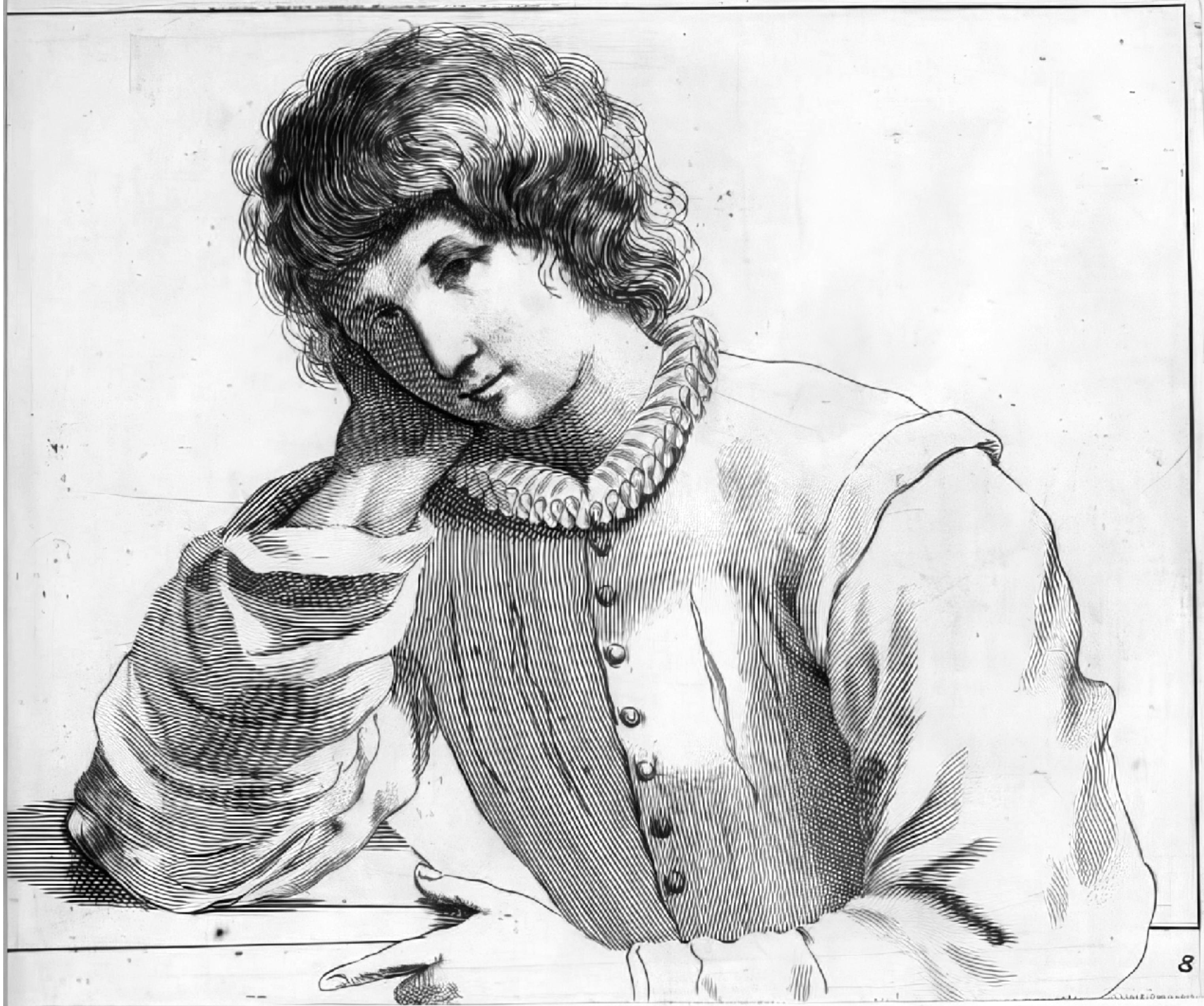


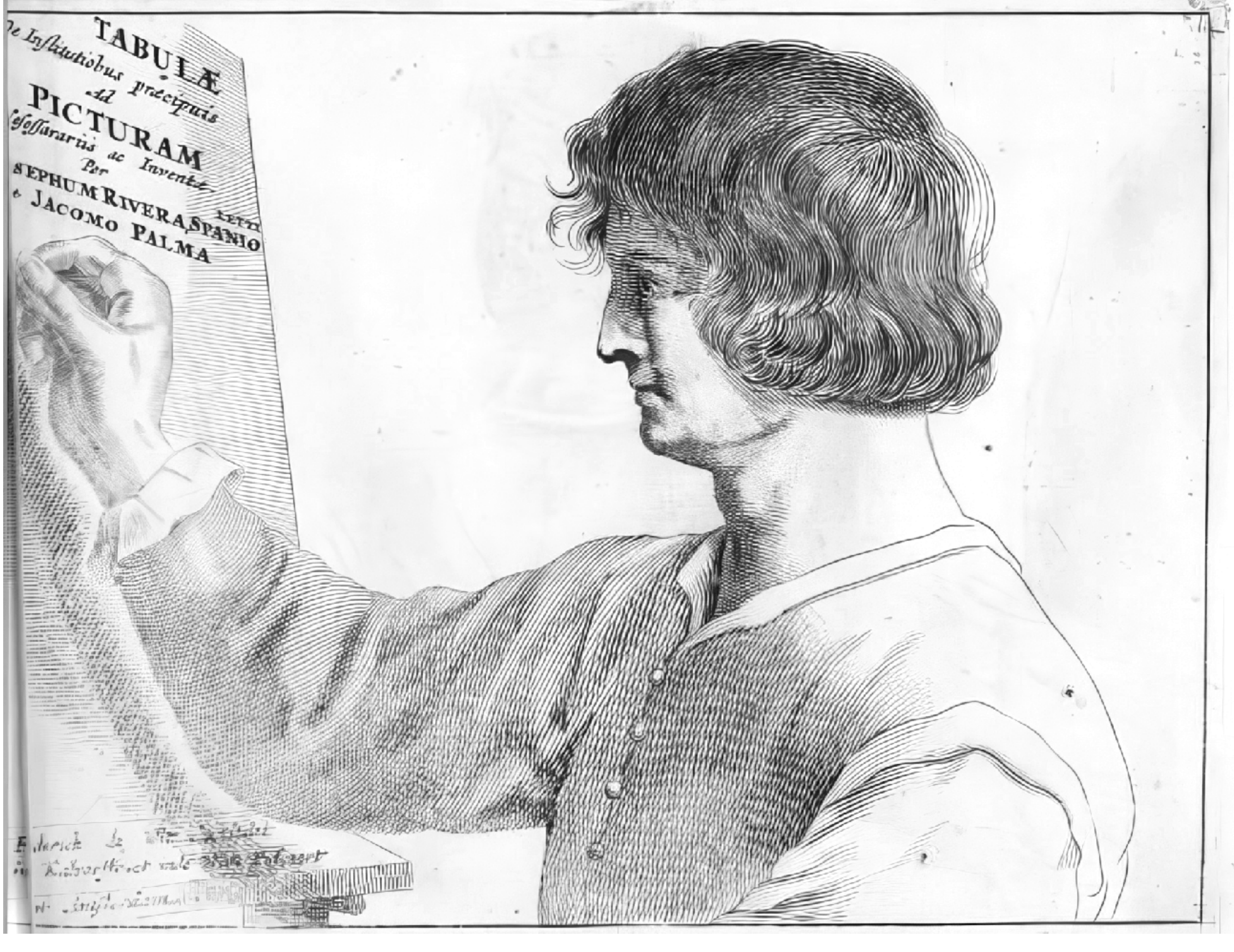


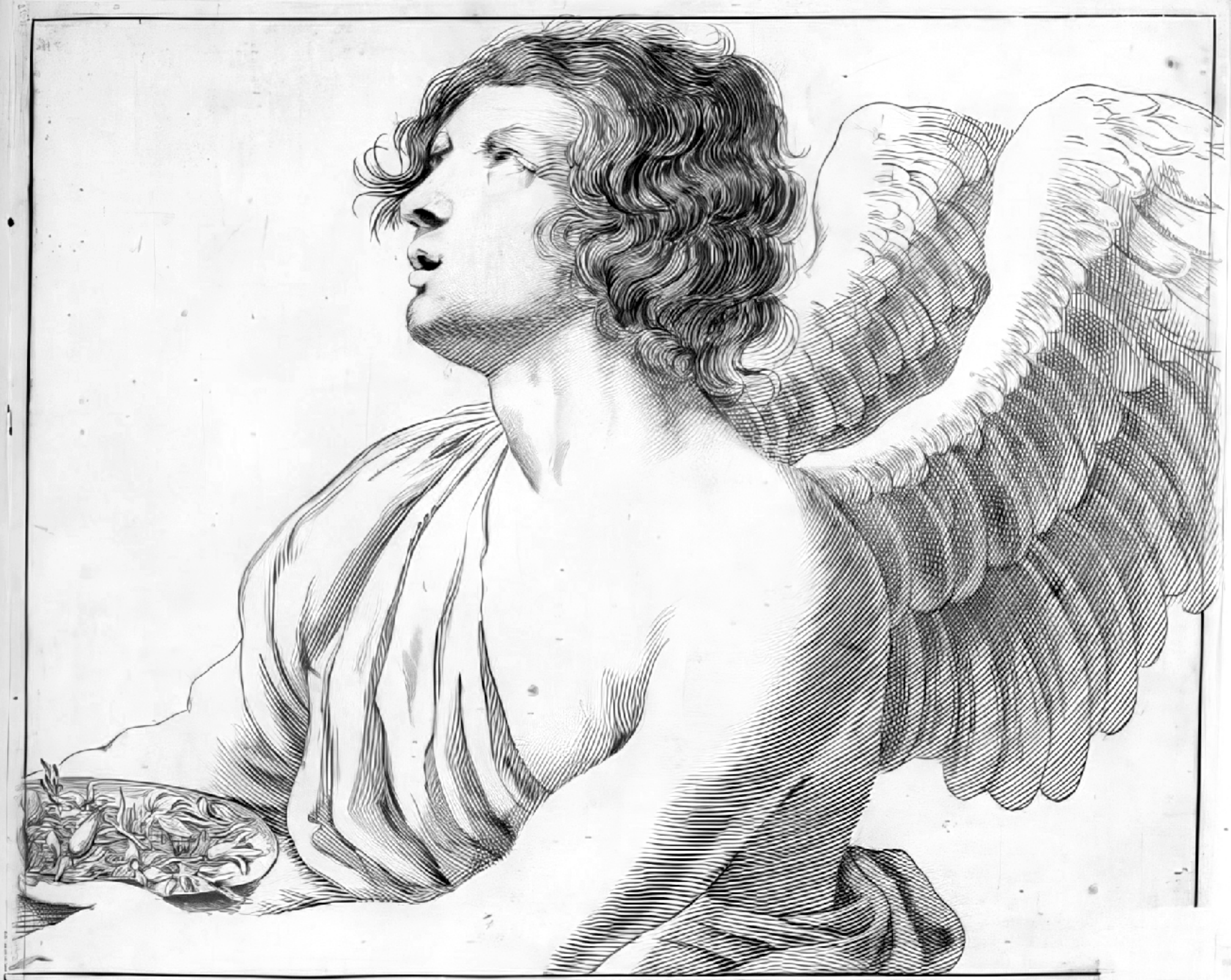


NN

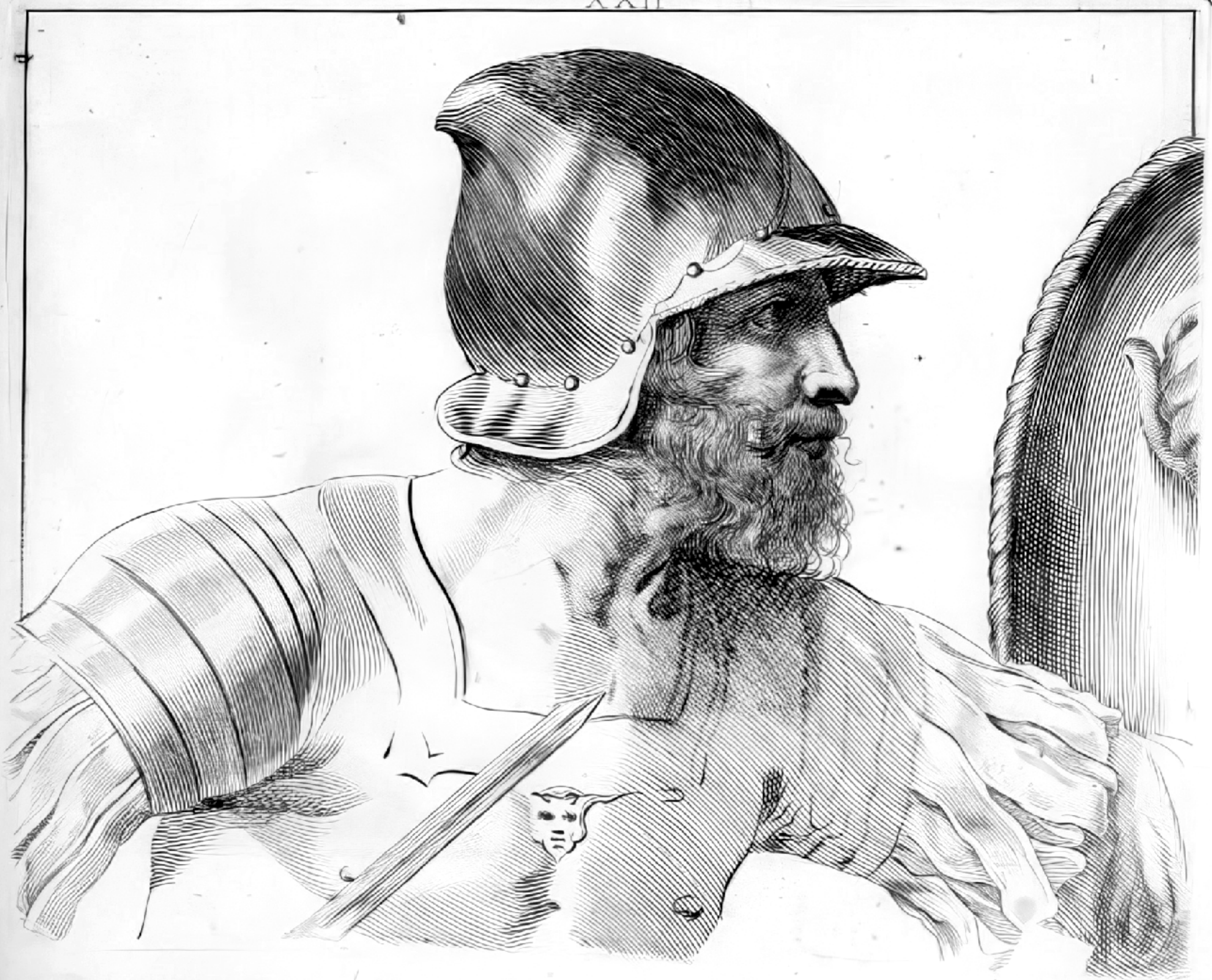
C20

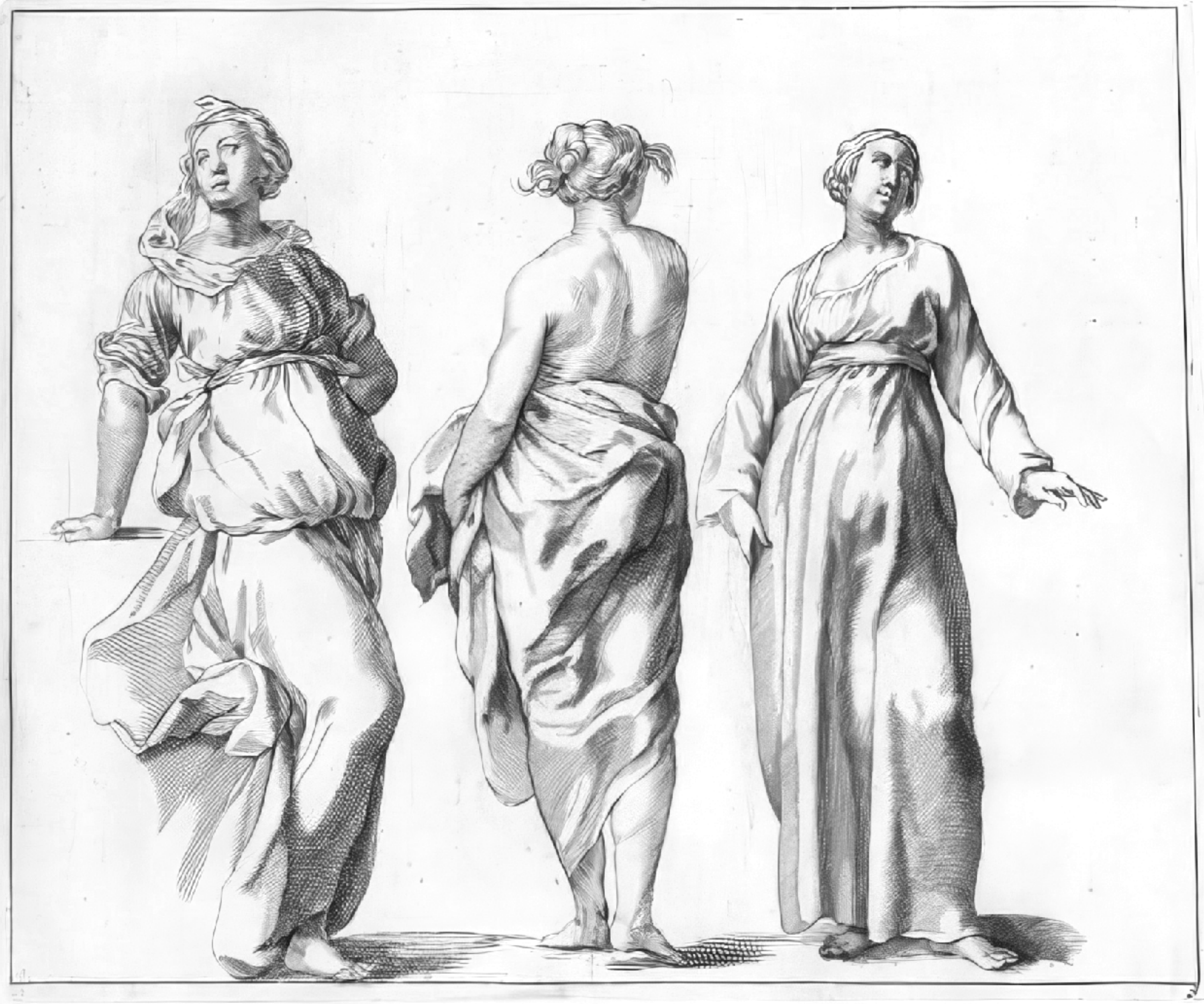

8

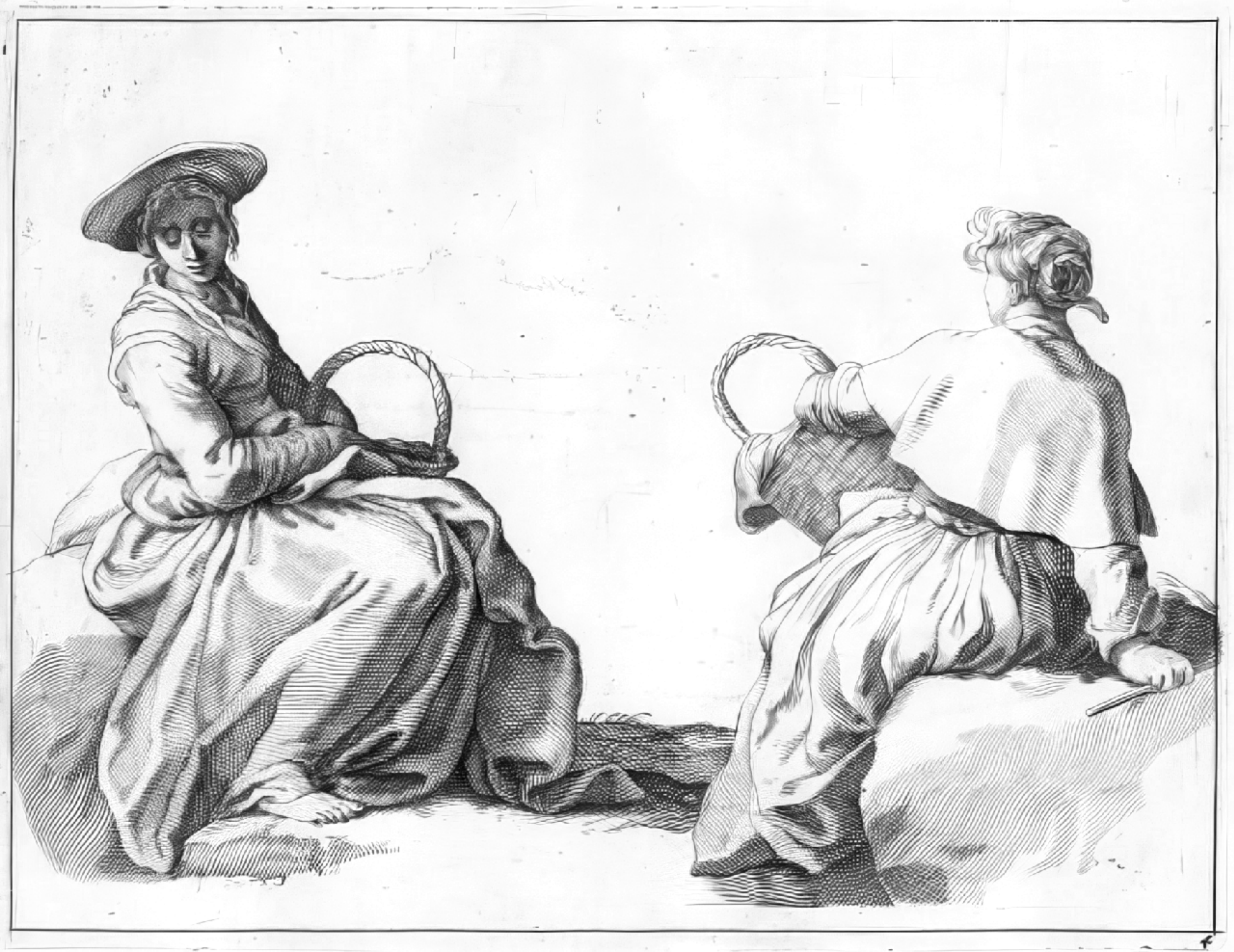

TABULÆ
e Inſtitutiobus præcipuis
Ad
PICTURAM
ſeſſarariis ac Inventa
Per
SEPHUM RIVERA SPANIO
LETTI
e JACOMO PALMA
Ederick de
in Kalverſtraet

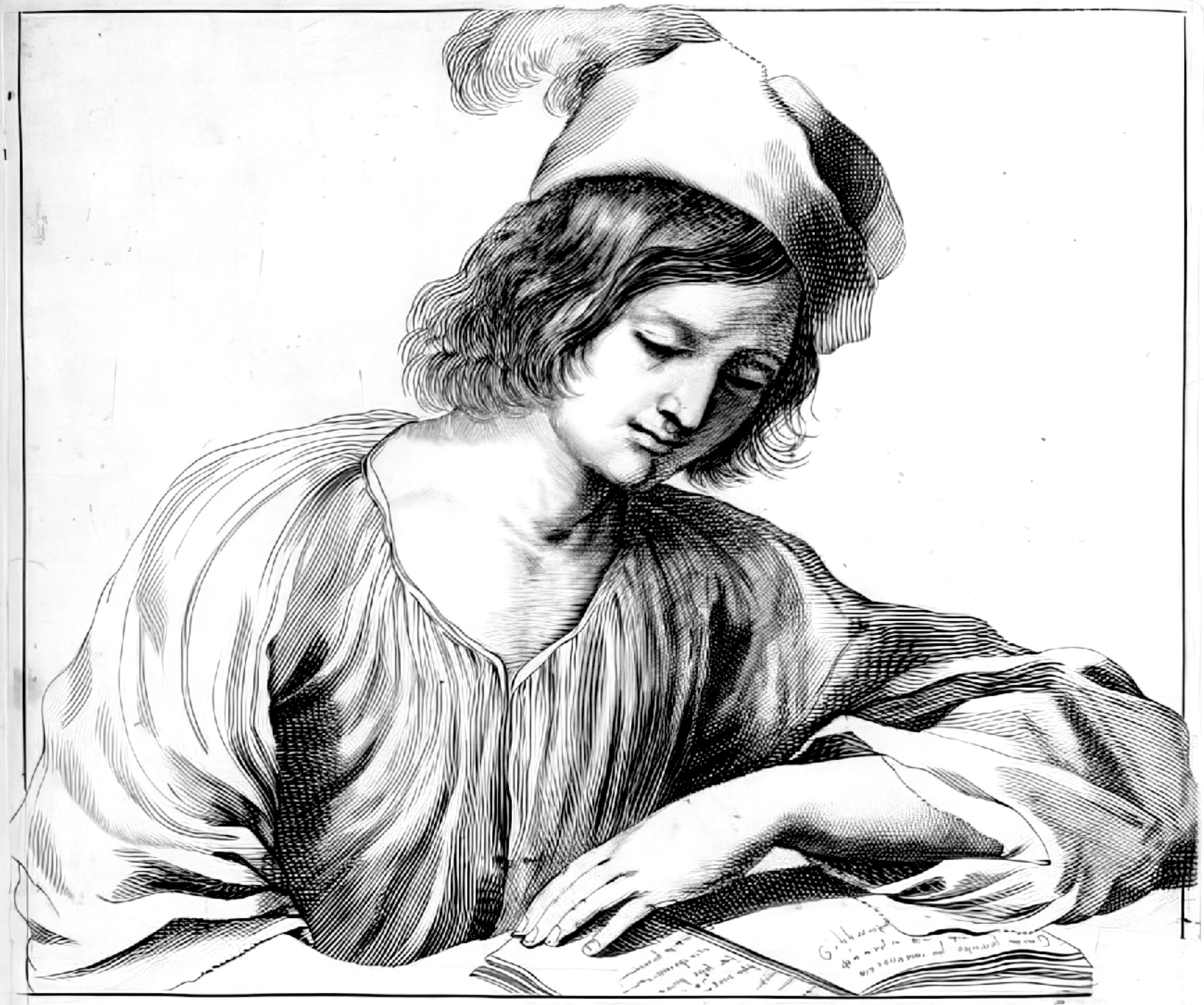


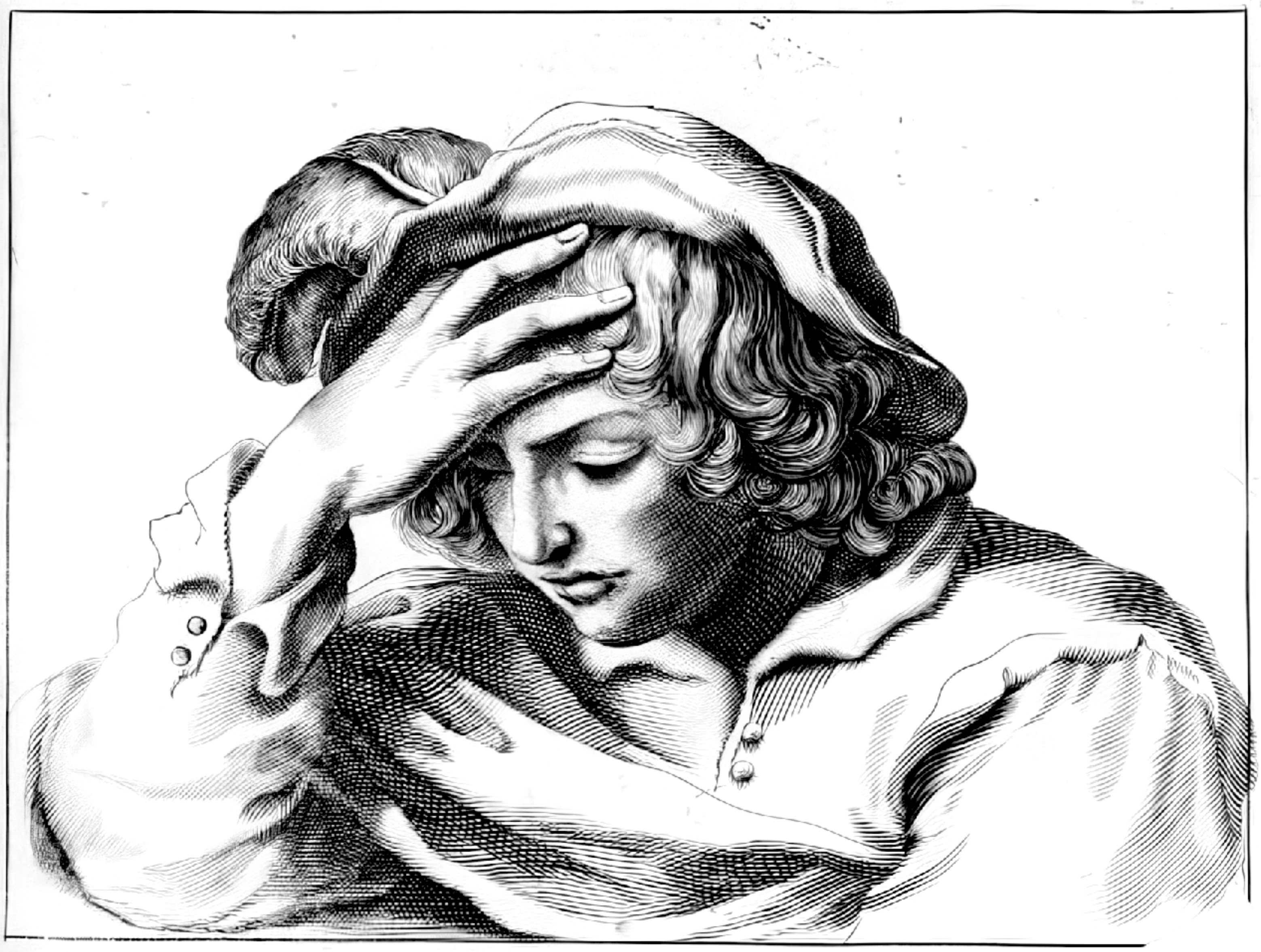
XXII



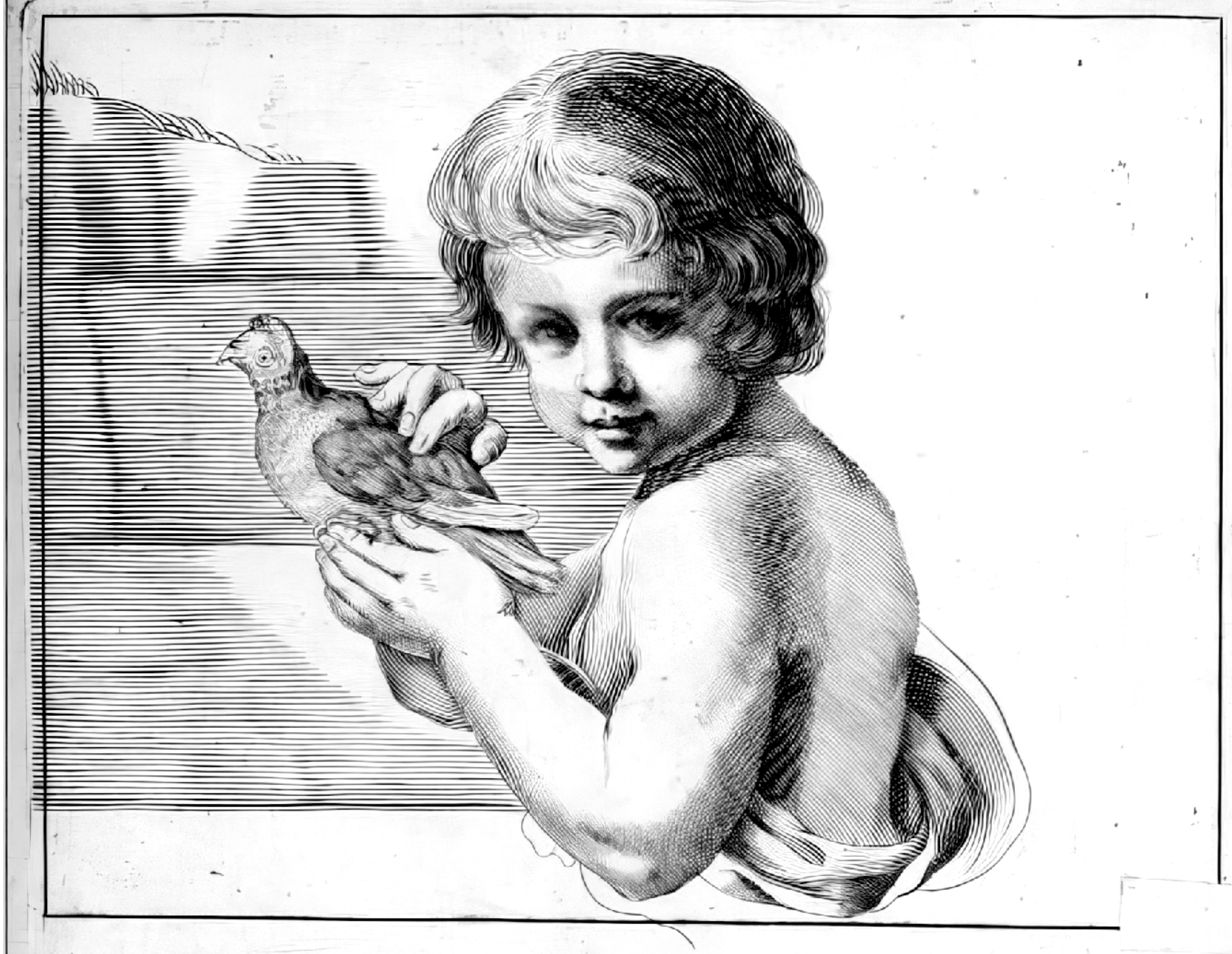


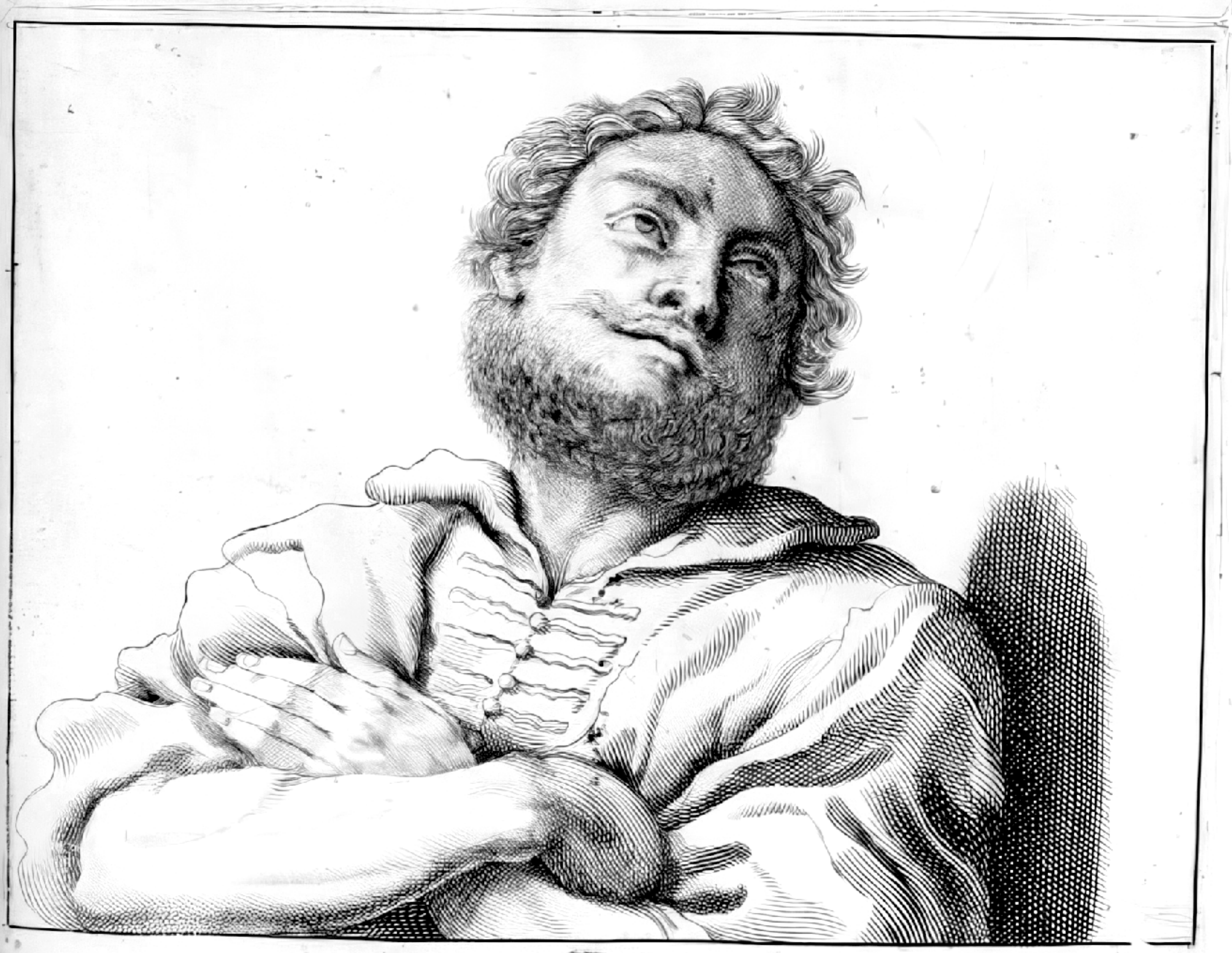

f

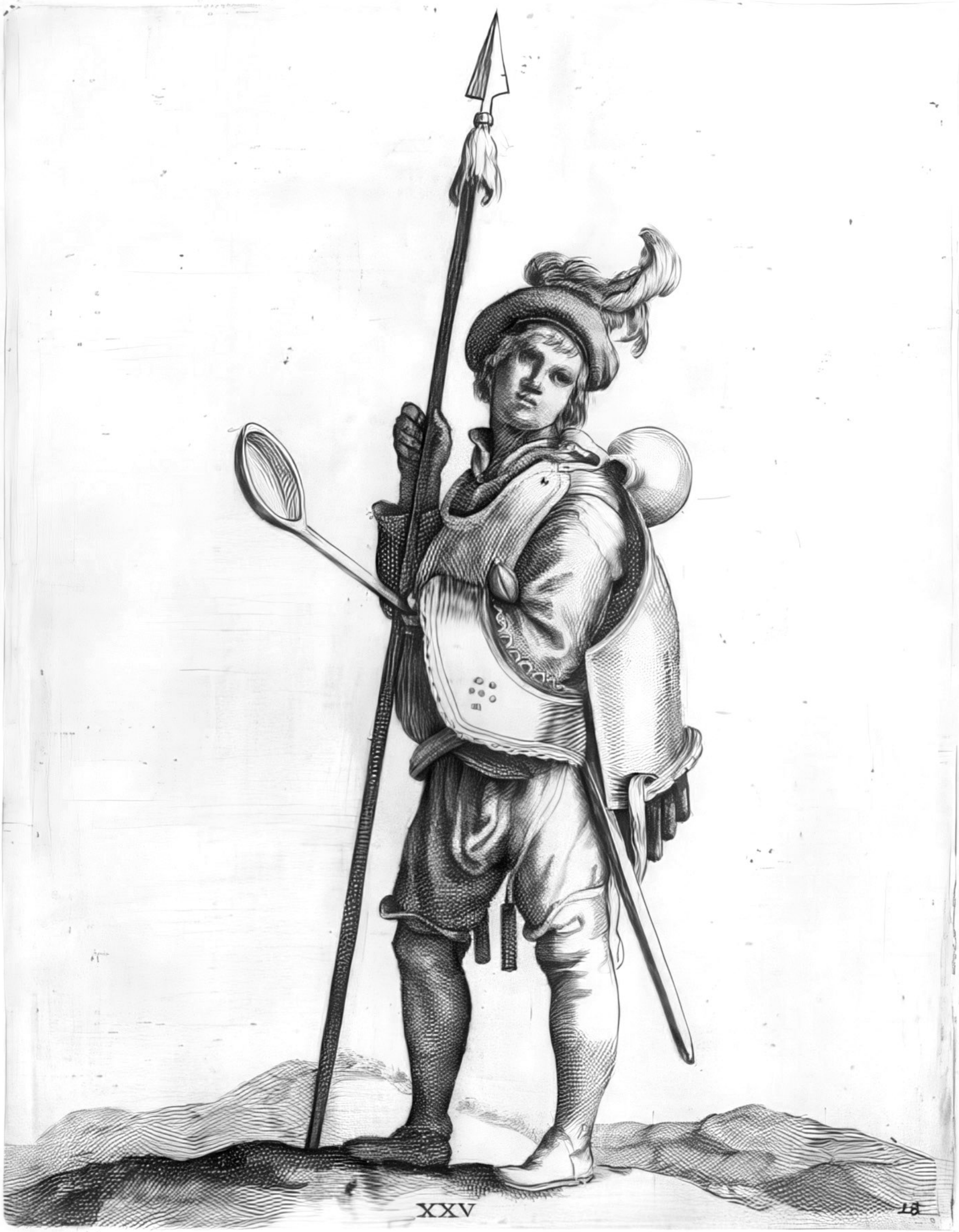




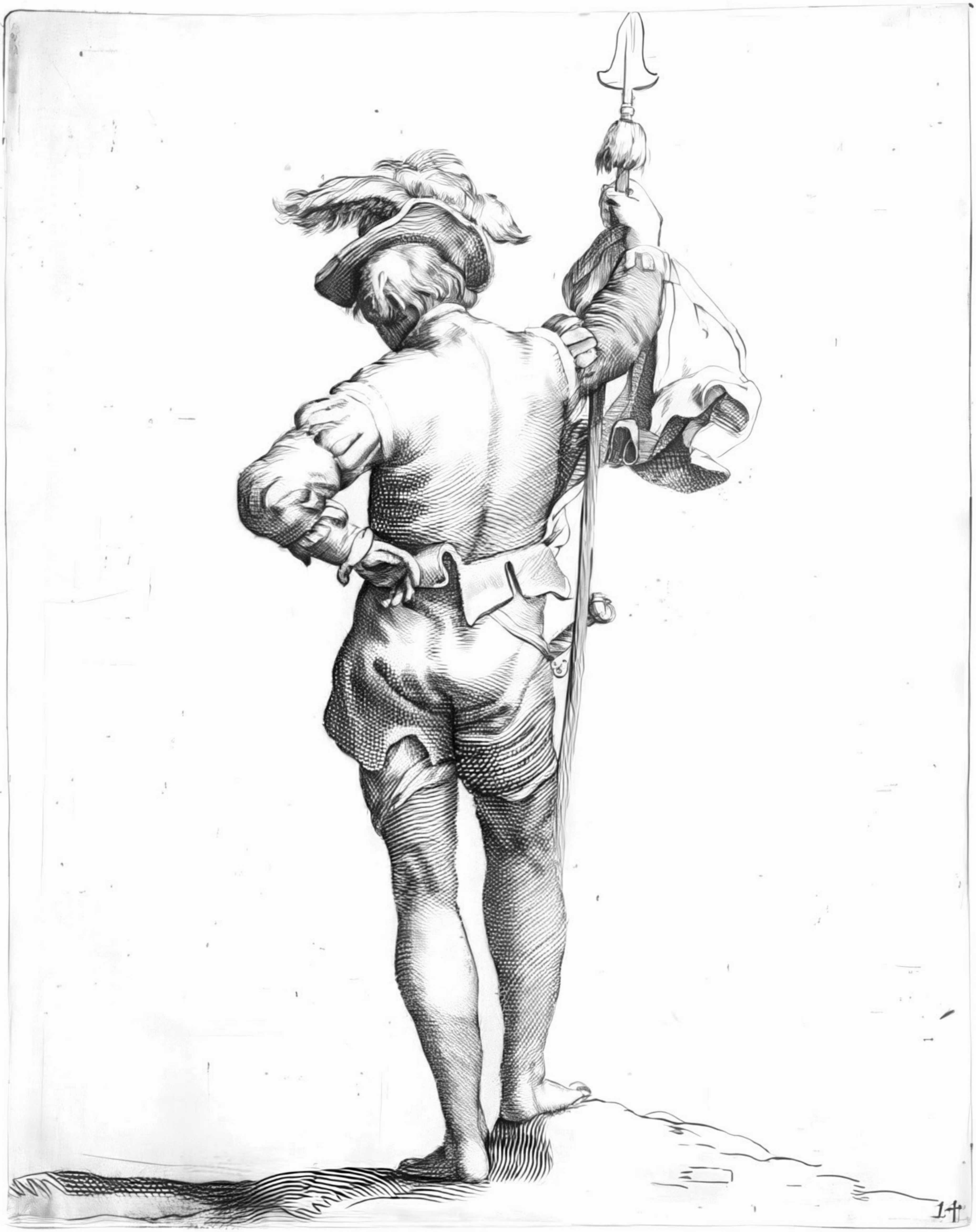
XXVIII



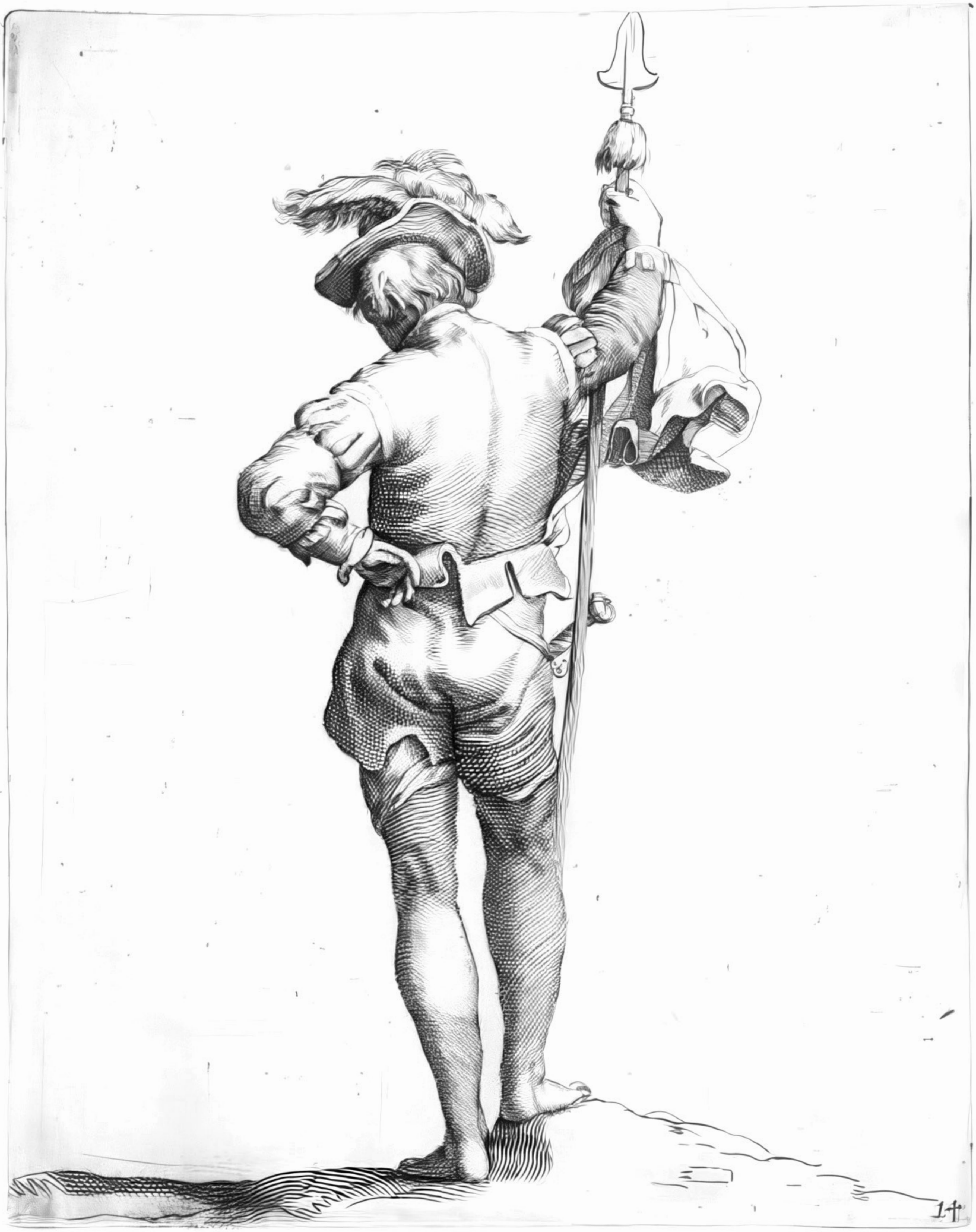


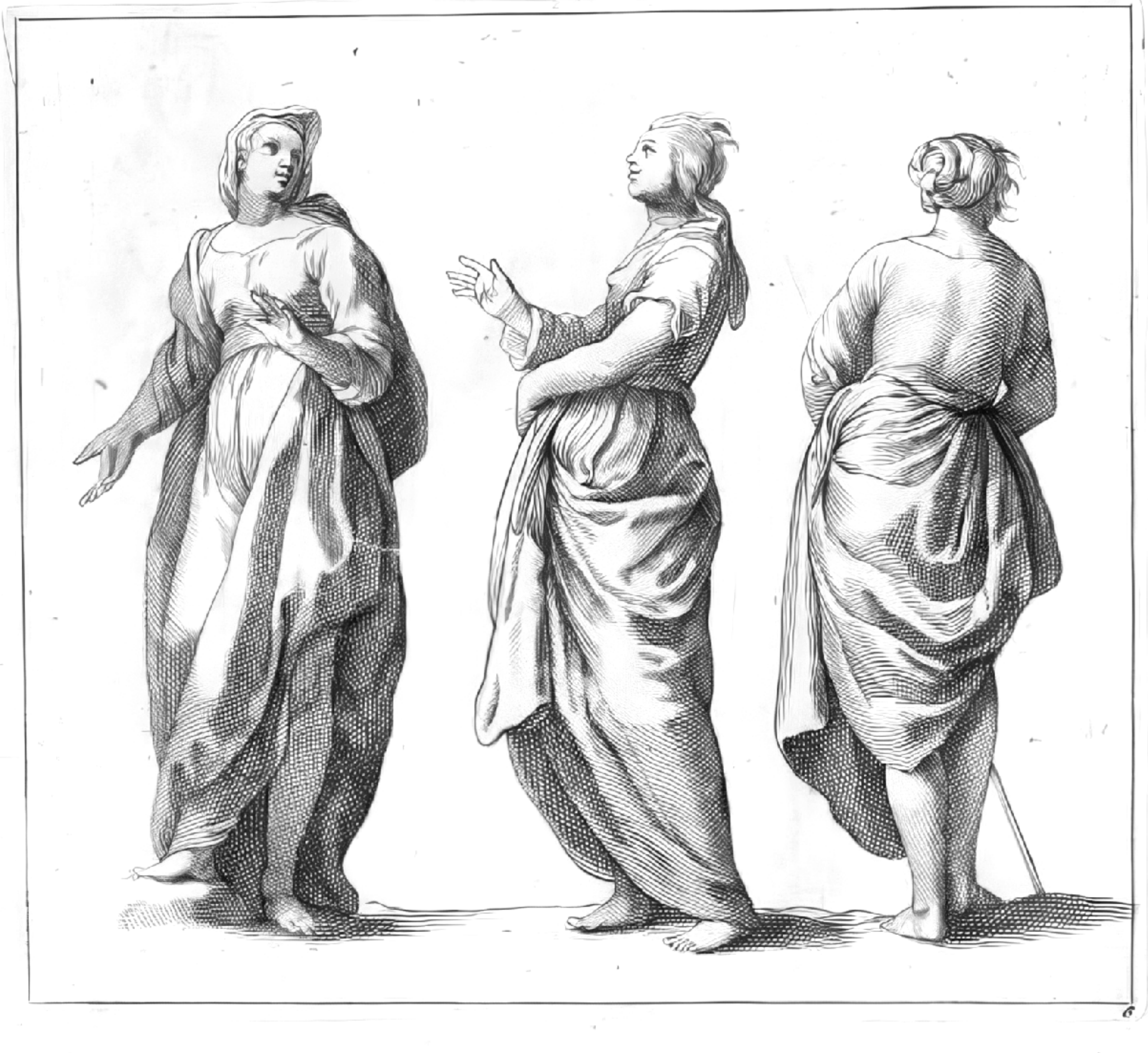


XXV

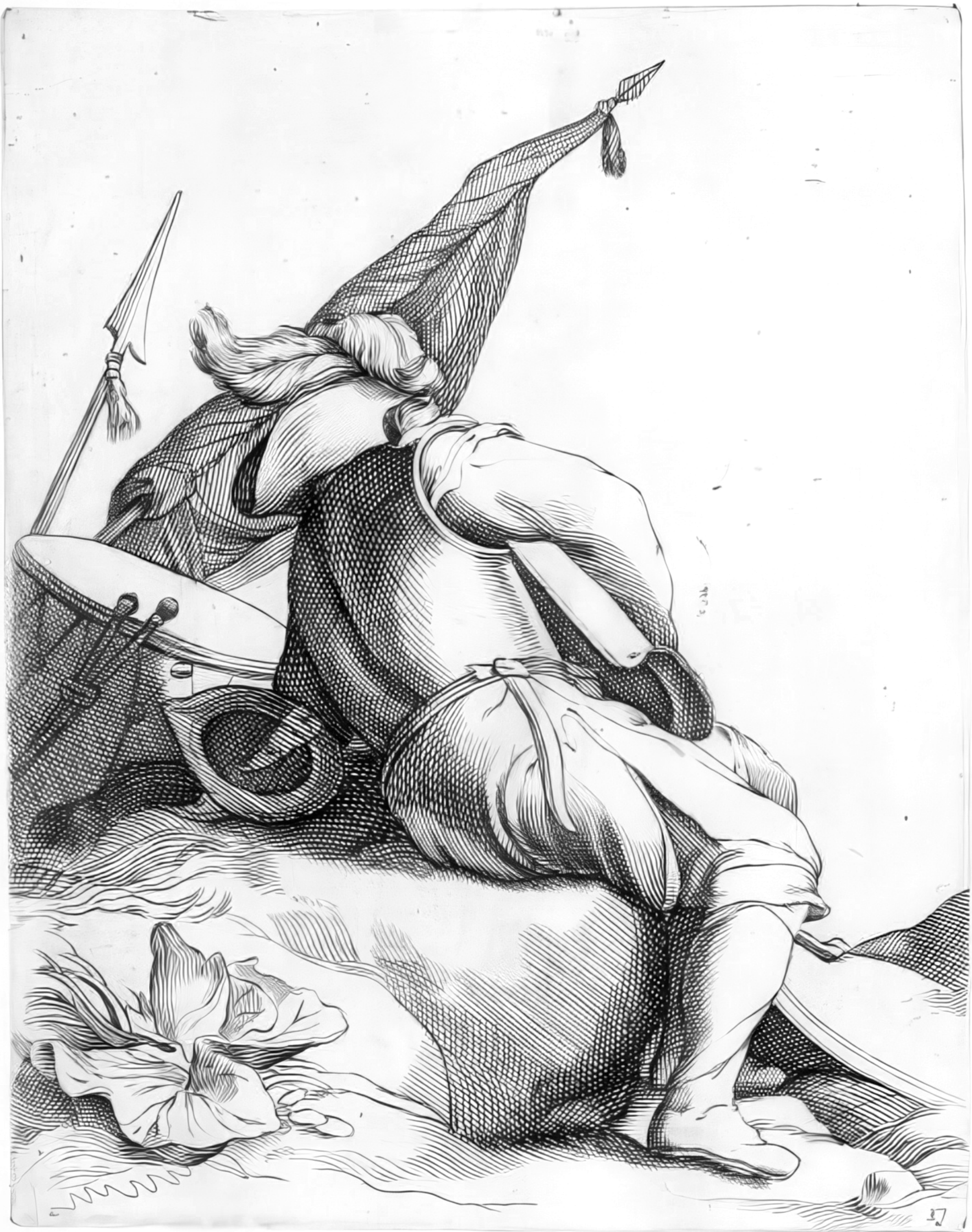


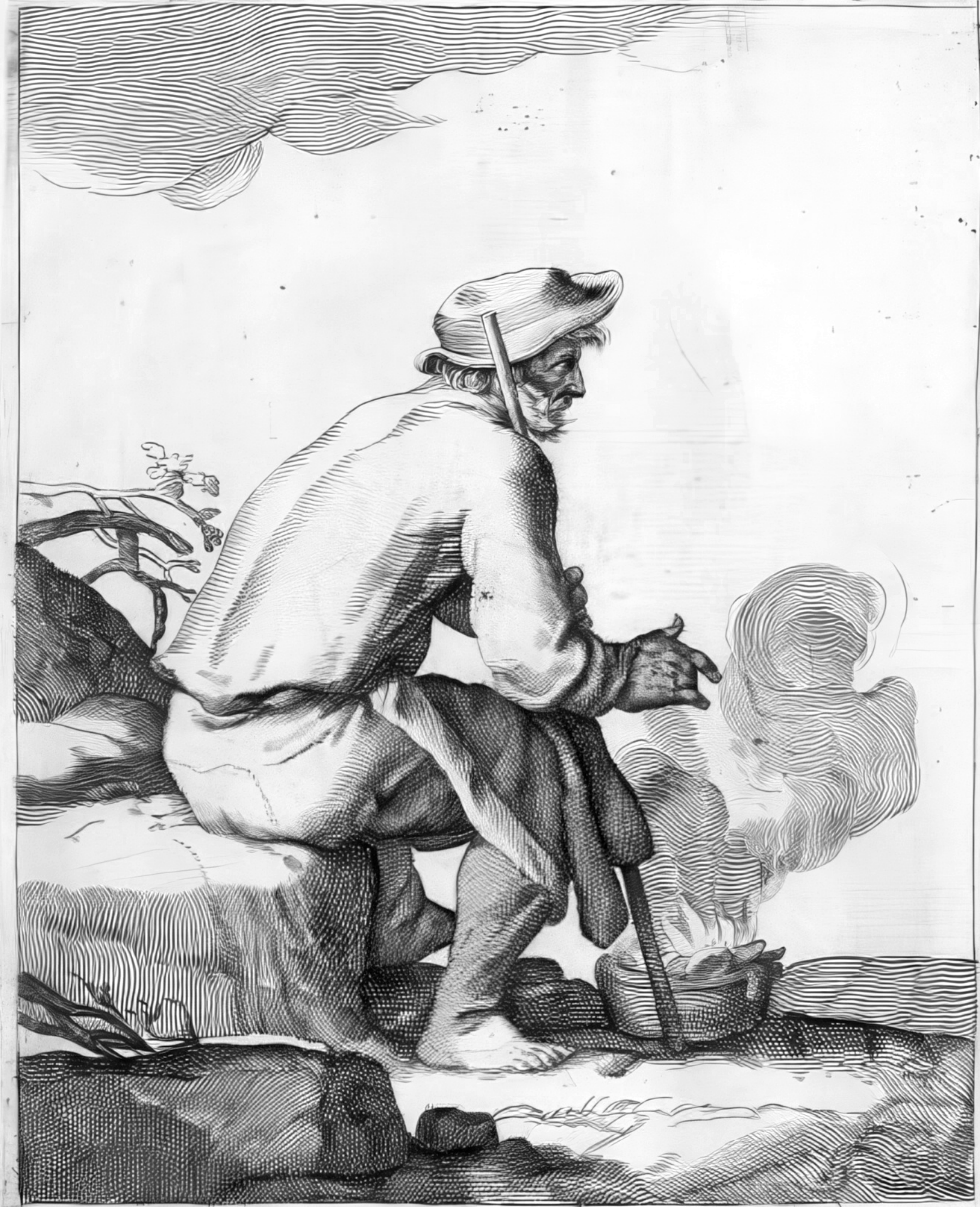
14


14

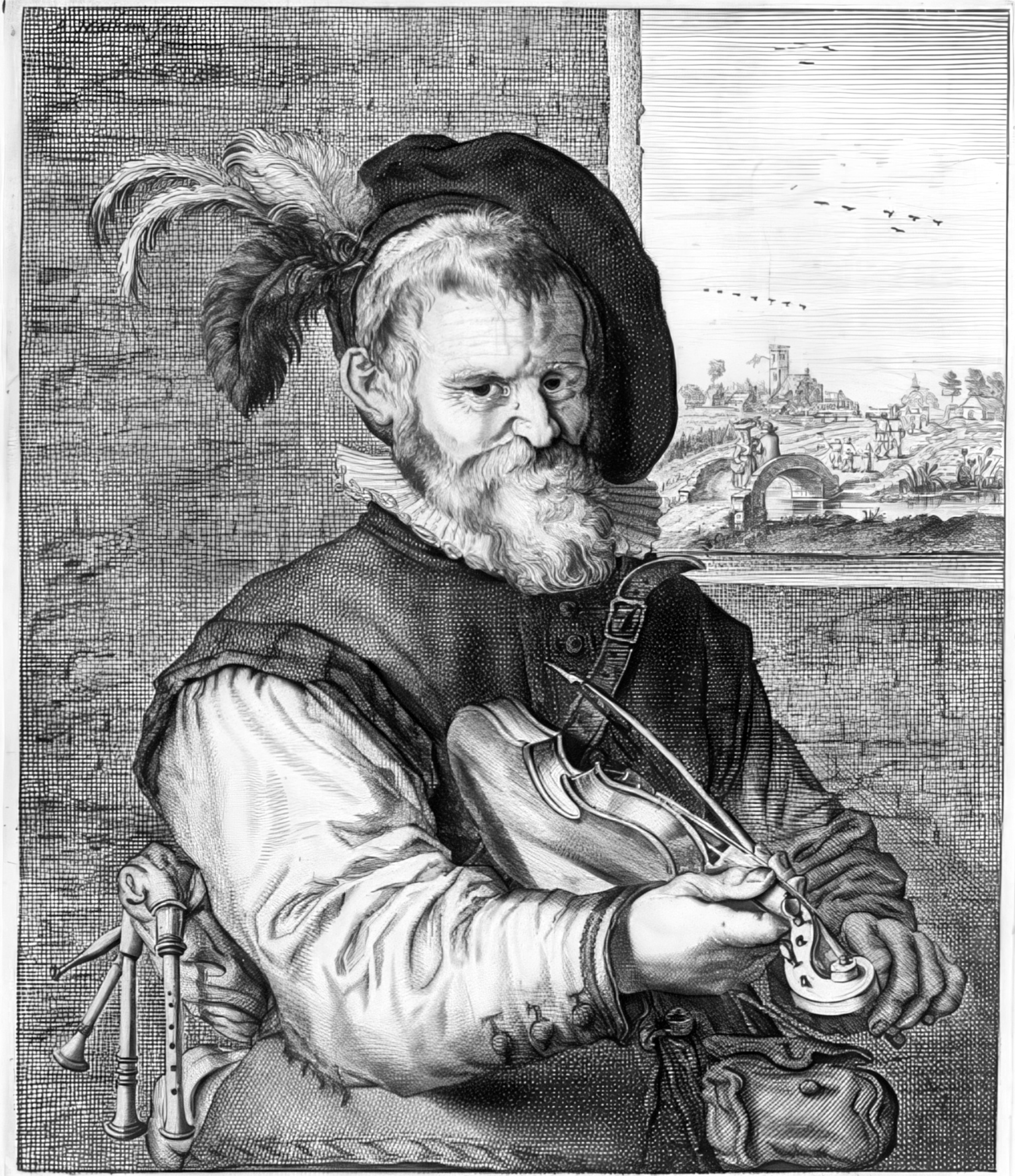


3.4


37

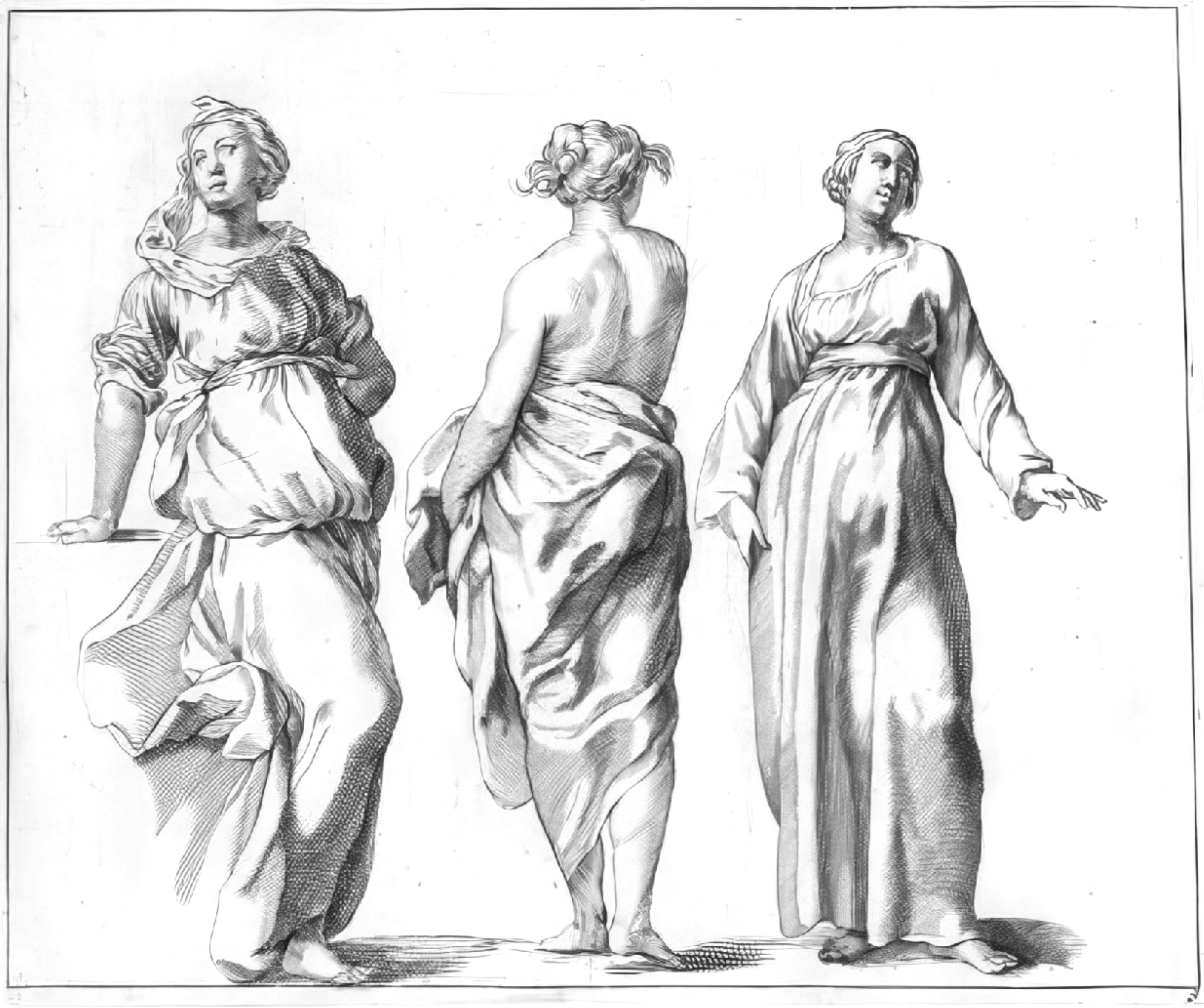


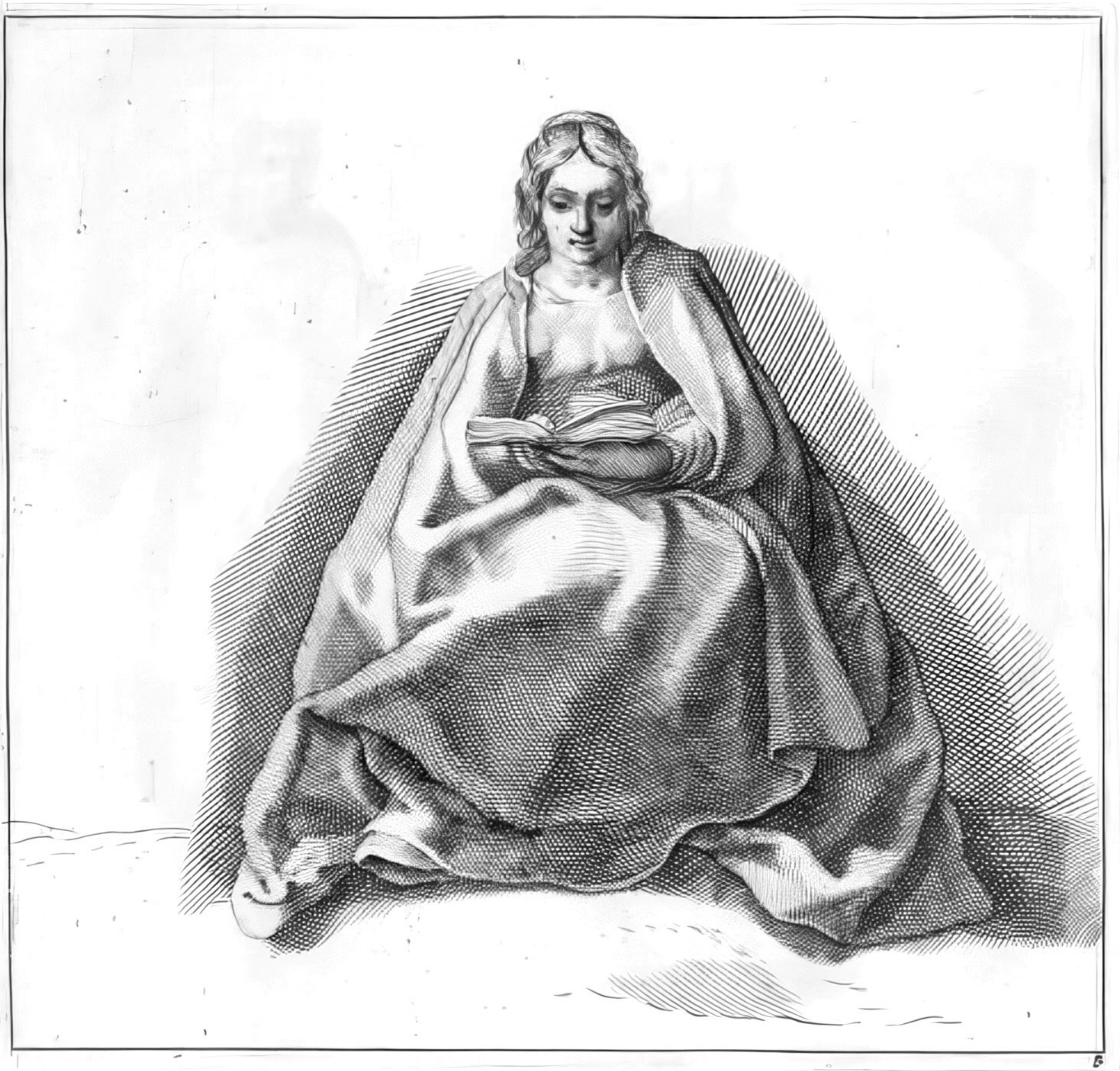
XXX

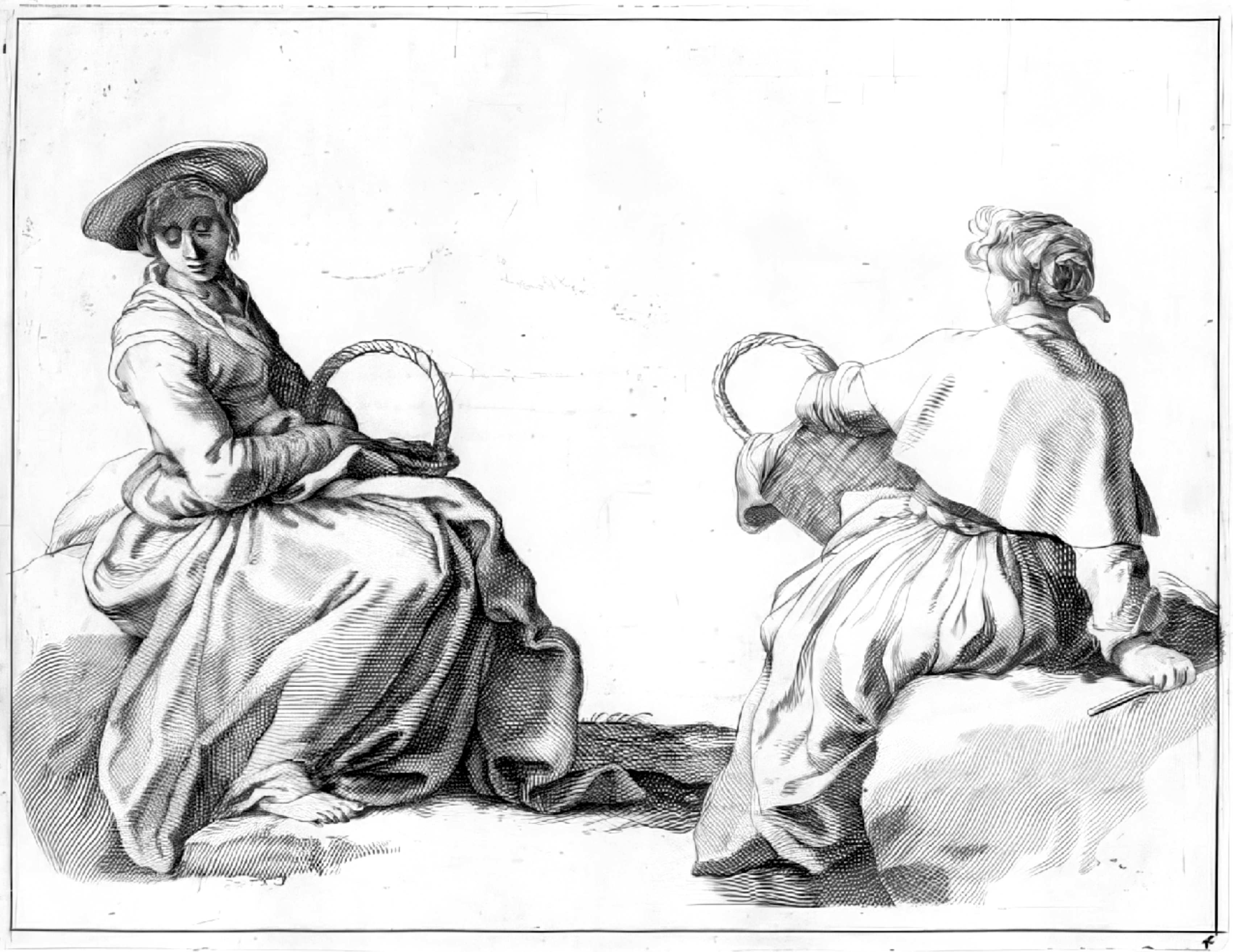


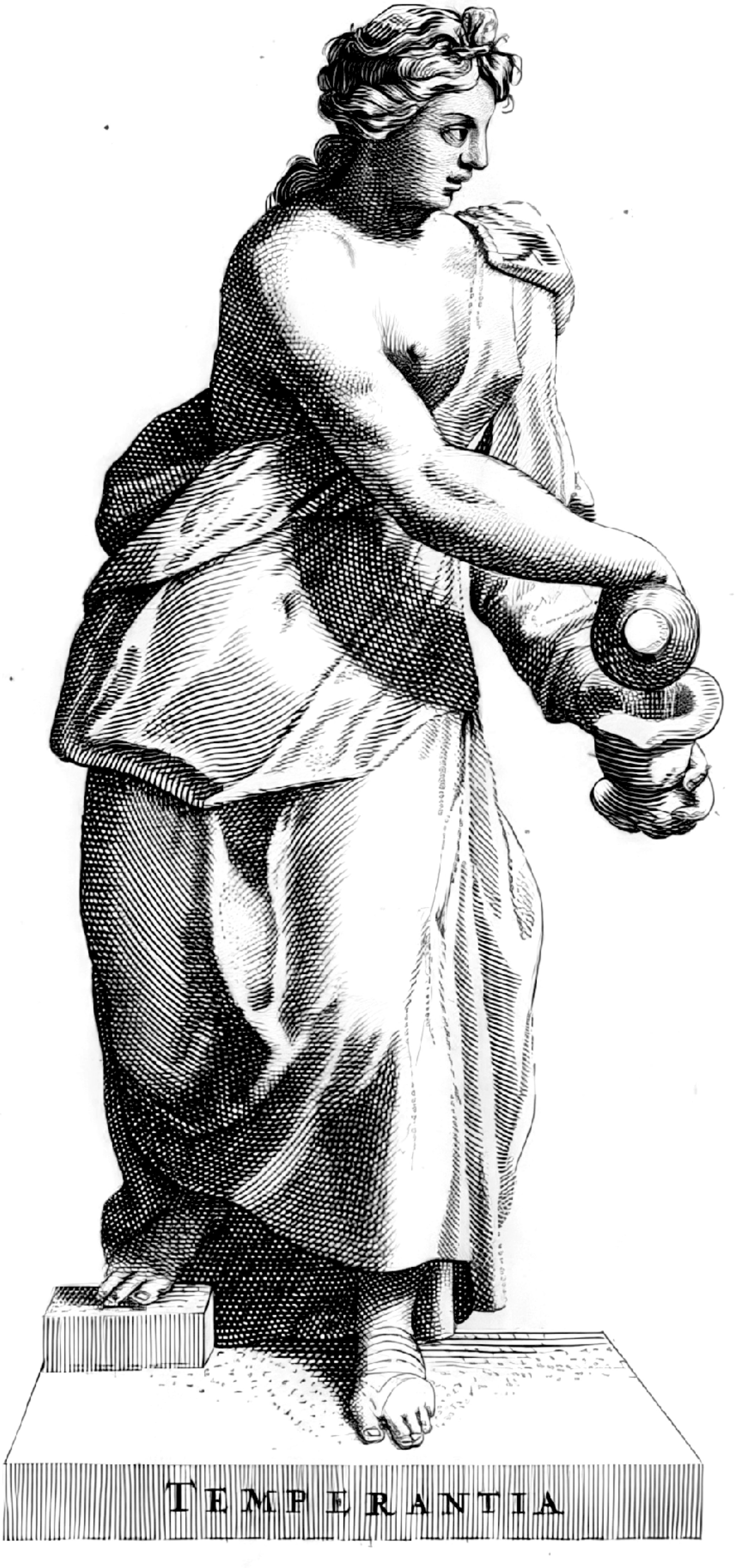
Myn ſnaren ſijn noch fix, ſoo wel als al de rest;
Maer als myn Aeltie helpt dan gaetet alderbest.

31



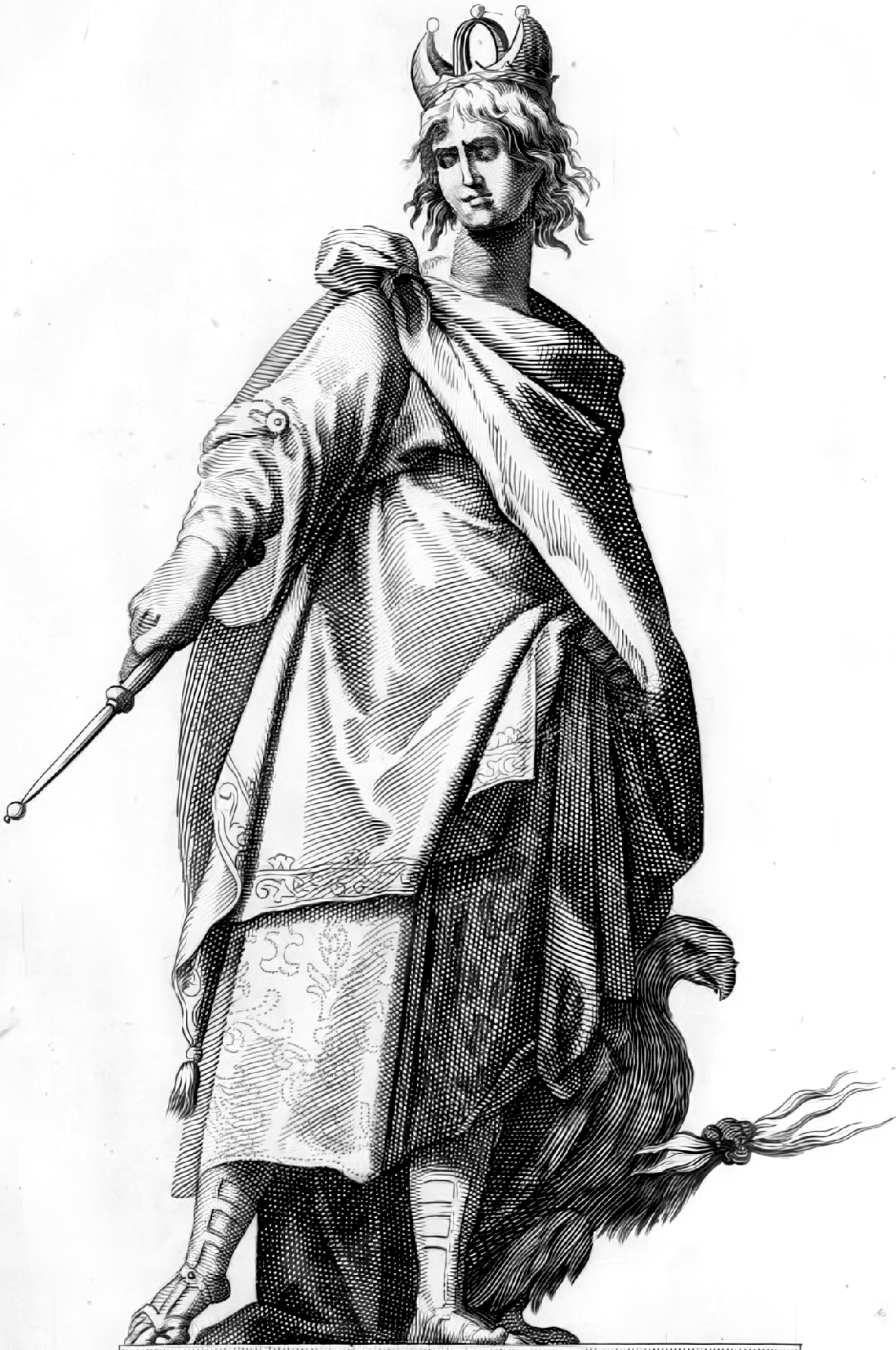





TEMPERANTIA

XXXVII

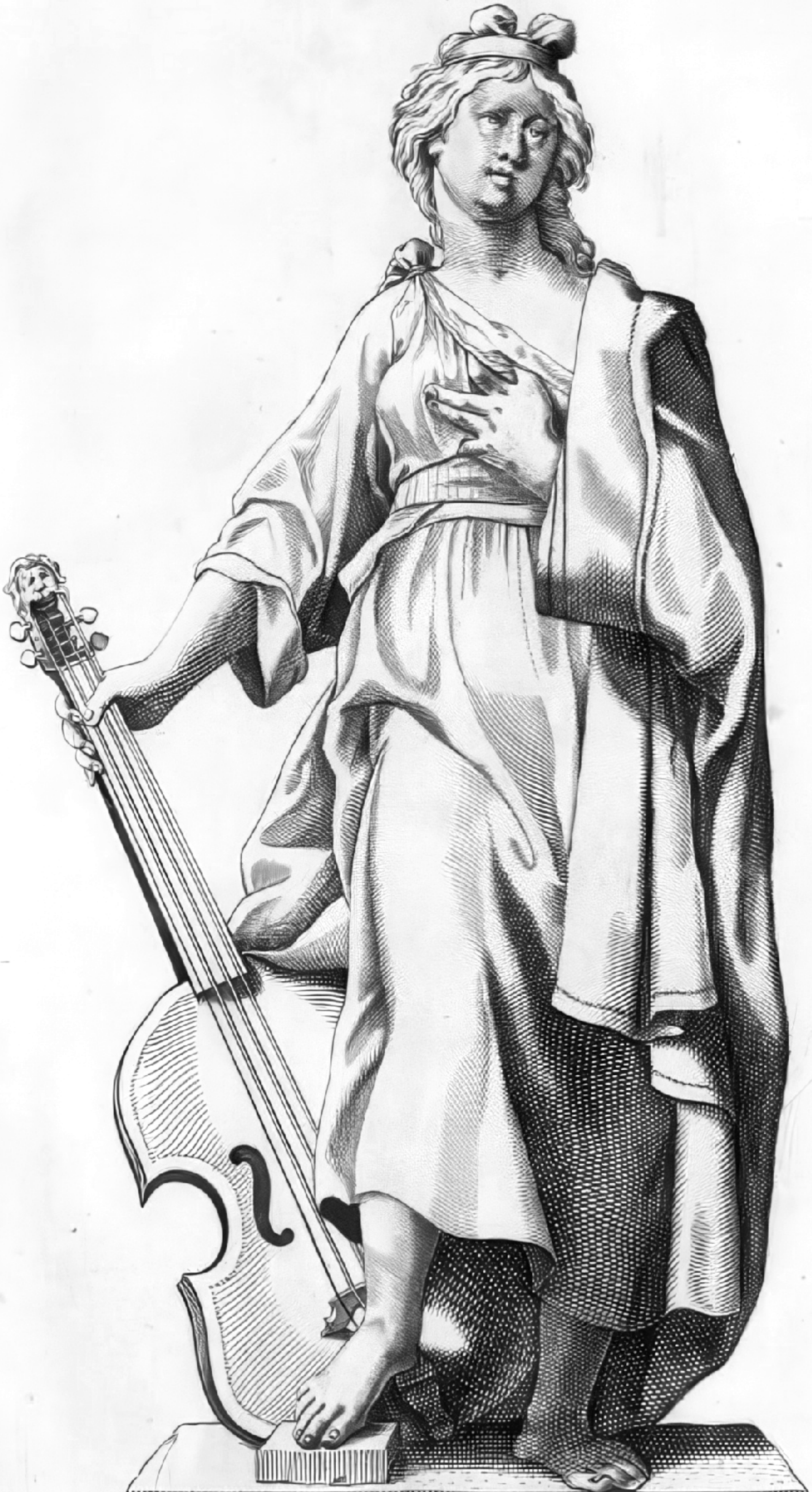
Romæ Lanfranco inven.



MAIESTAS

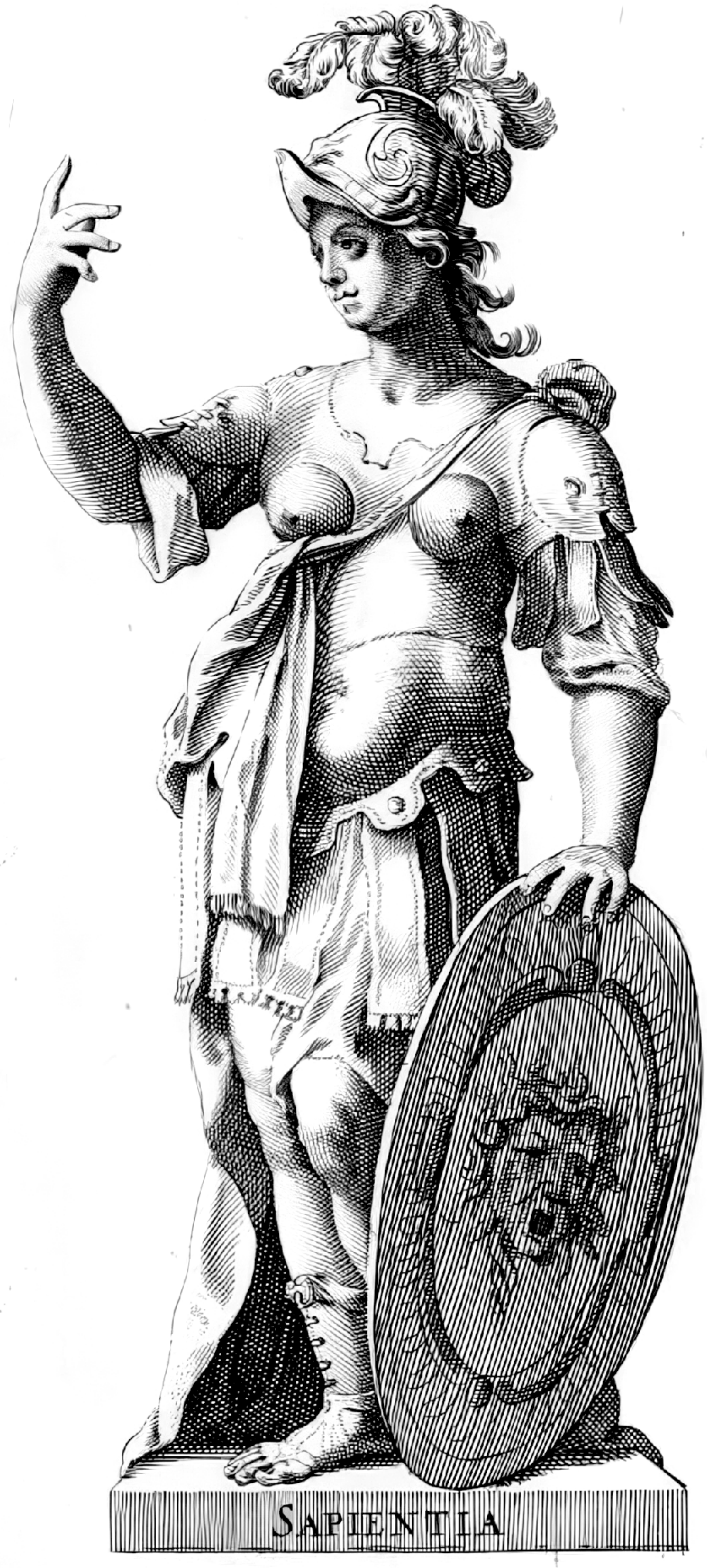
Roma Io. Lanfranc.º delin.

XXXVIII



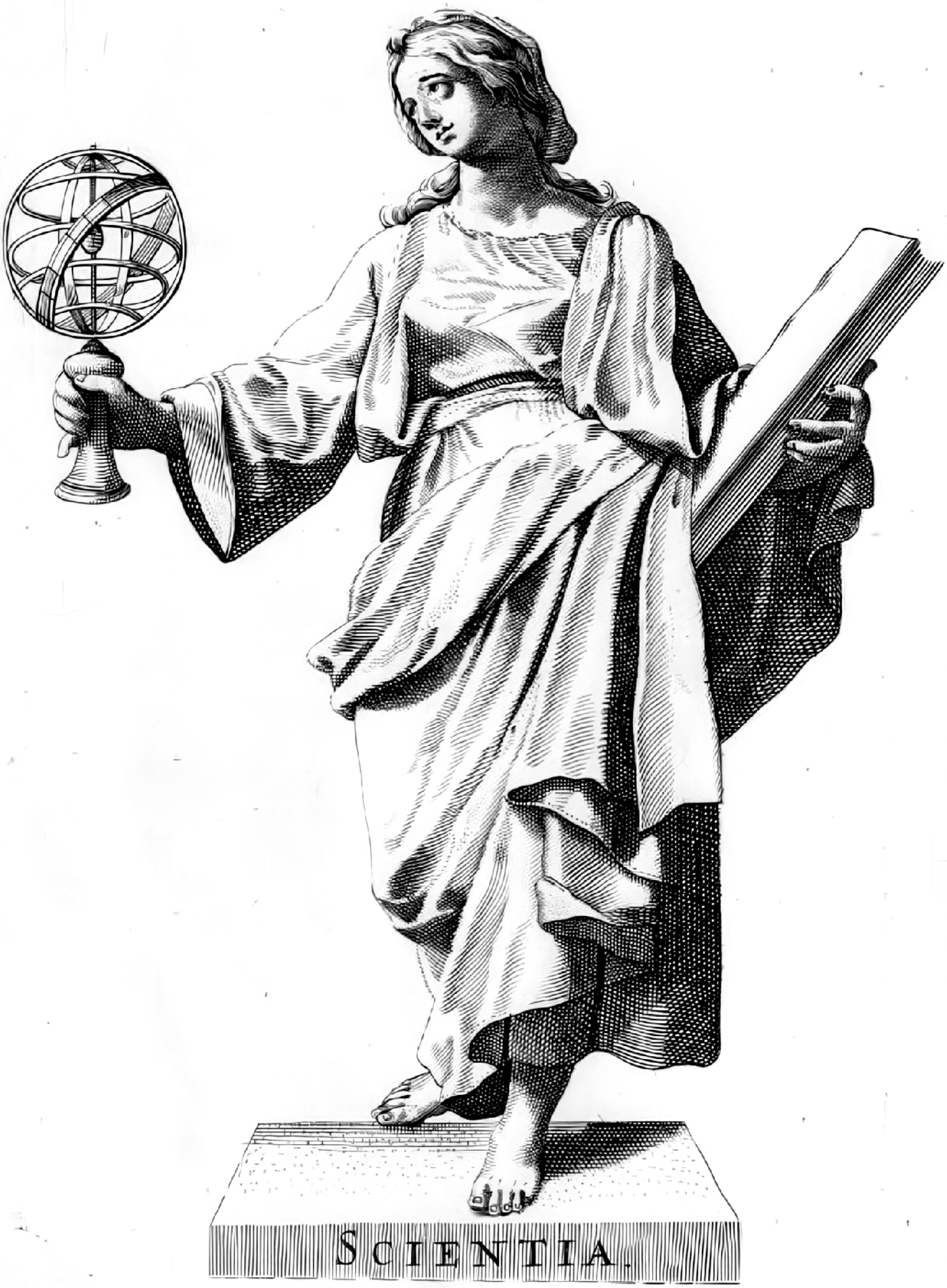
XXXIX

Roma Lanfrancꝰ delin.



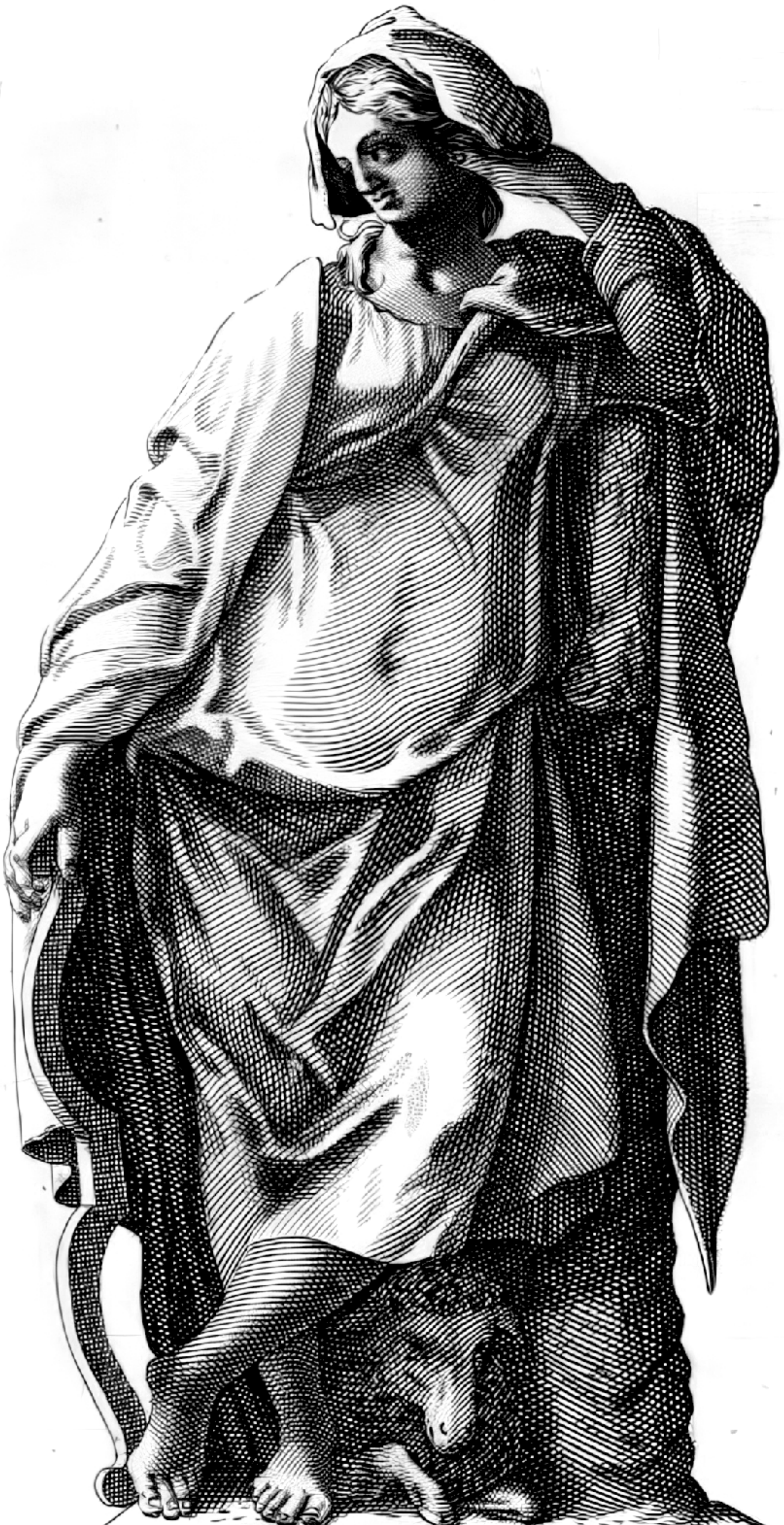
XL

Roma Lanfrancº delin.



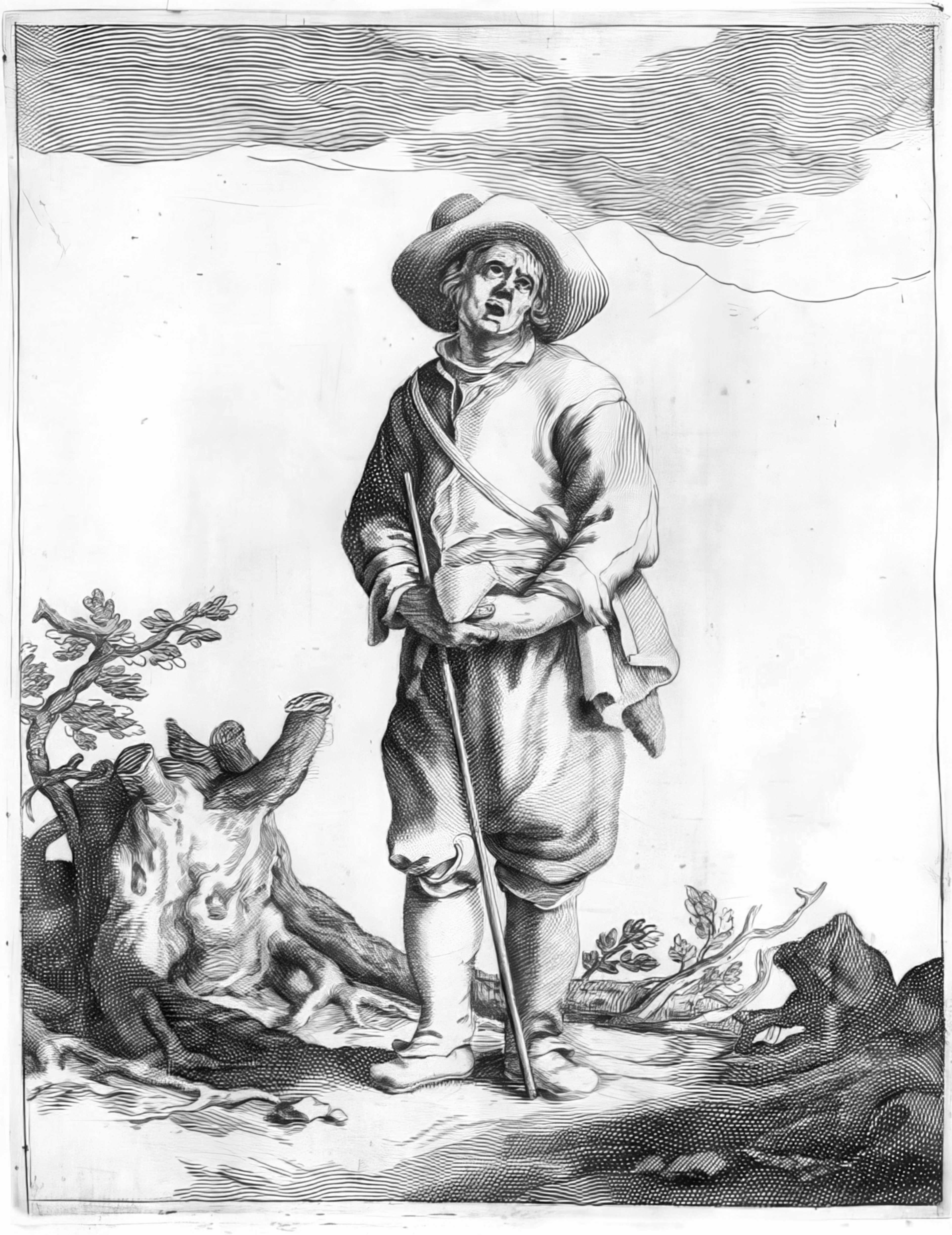
Roma Io. Lantfranº delin.

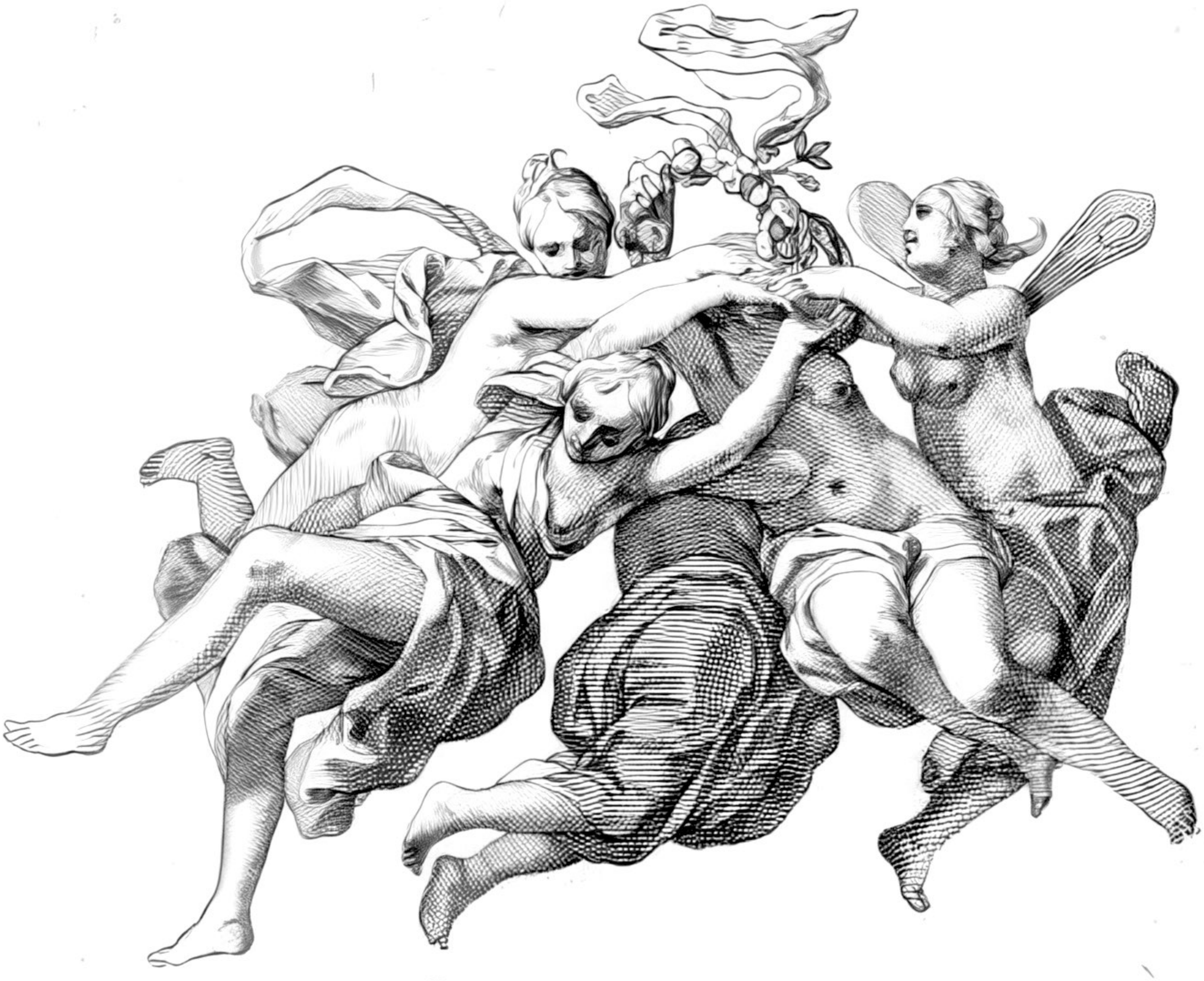
XLI

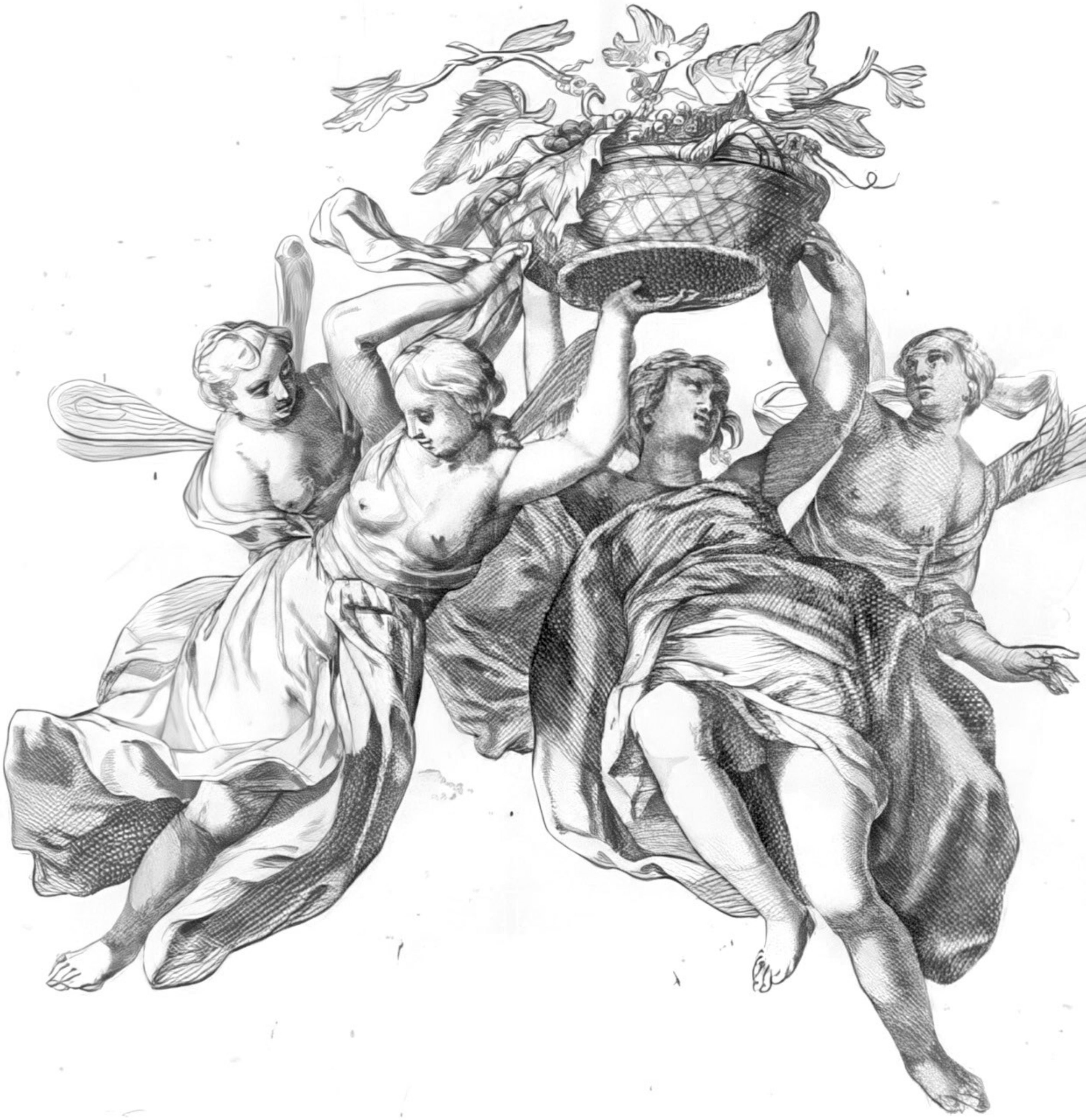

MANSVETVDO

XLII

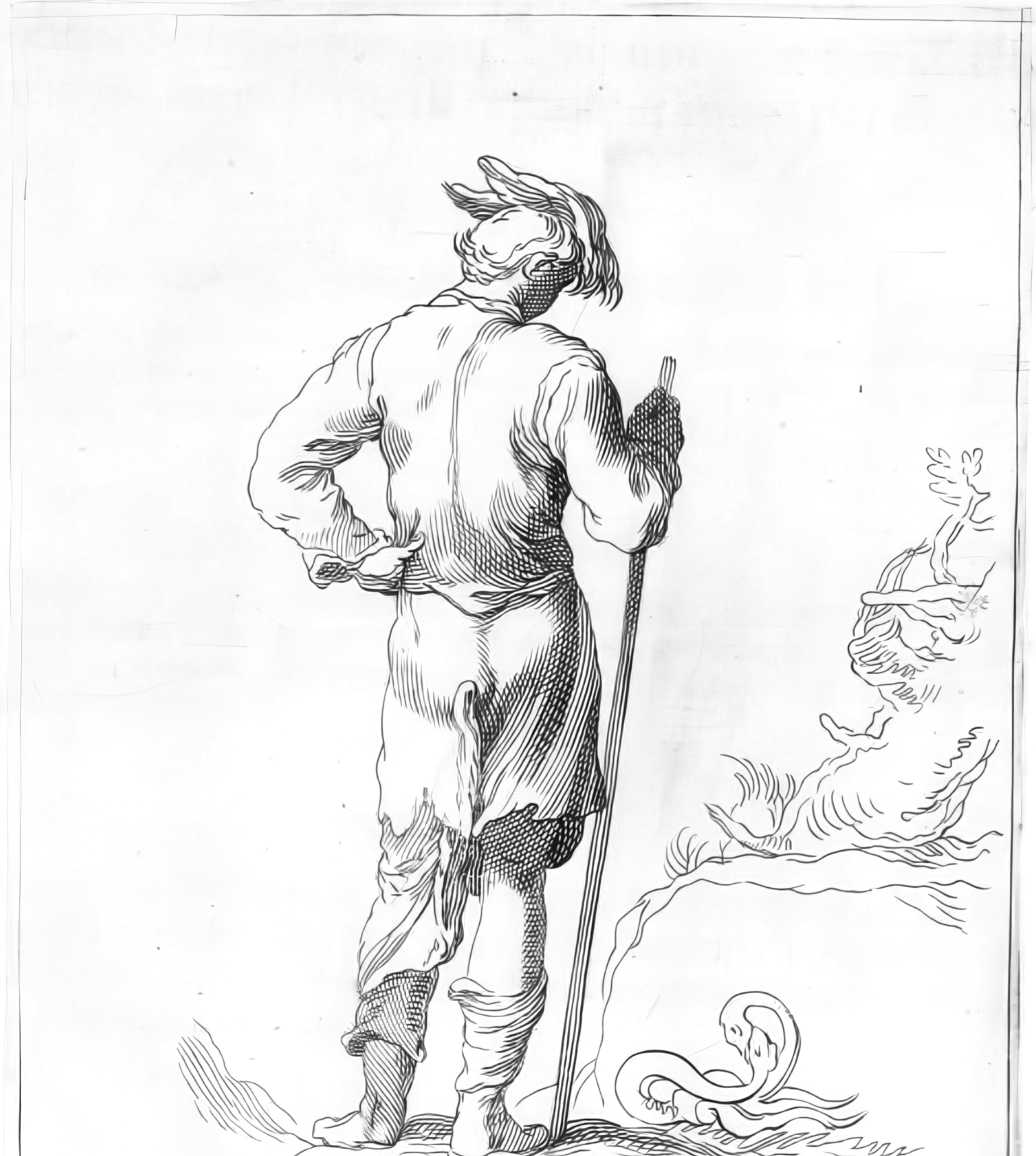
Io. Lanfrancꝰ delin.







44



THE FIFTH PART

Containing the representation of all kinds of four-footed animals; with their measurements, proportions, fore shortenings, and anatomy — all taken from nature in three types of representations by several excellent masters.

The Method and Practice of Drawing the Horse with Compass and Ruler, and by the Practice of Geometry

Having previously defined some principles of the horse's proportions, I will now show how to draw it using a compass and a ruler, establishing its proportions with circles. For example, to draw it with the compass, make a square divided into nine parts: like A, B, C, D, E, F, G, H, I, K, L, M, N, O, P, Q. Then, divide one of the ninths in half, then halve that again, and divide this quarter into six parts. Take three of these six parts, and again divide them into six.

Now, imagine that segment M to K is one foot, R to S is half a foot, and S to T is a quarter of a foot or three inches, and again the quarter of a foot, or six half-inches.

To begin constructing the horse's body, first find the centre of the head. To do this, take a foot and one inch, and set it along the G-H line on side G. This will give you point O. From there, draw a vertical line upward of half a foot and two inches high, which gives you point X, the centre of the head. Around this point, construct a square using it as one of the corners, aligning it to suit the direction you want the horse's head to face.

For clarity, if X is the same point, use it as the base for a square measuring one and a half feet in length. Place the compass point on X and draw a circle labelled 1, 2, 3, 4. The diameter runs from point 2 to 4, and the perpendicular is from 4 to T. Decide what gesture you want for the horse's head — tilted to the ground like J, or to the side like B or C, or raised like D, or facing forward like E.

Let's proceed with the version where the horse is looking directly down, like Y. With a height of one and a half feet for the head, I take three-quarters of a foot for the width — that is, 4 to S. Making the square from 4 to S, T, 6, I divide it into six parts along the length and three along the width, making each section a quarter of a foot square. Using these subdivisions, I draw the horse's head as shown.

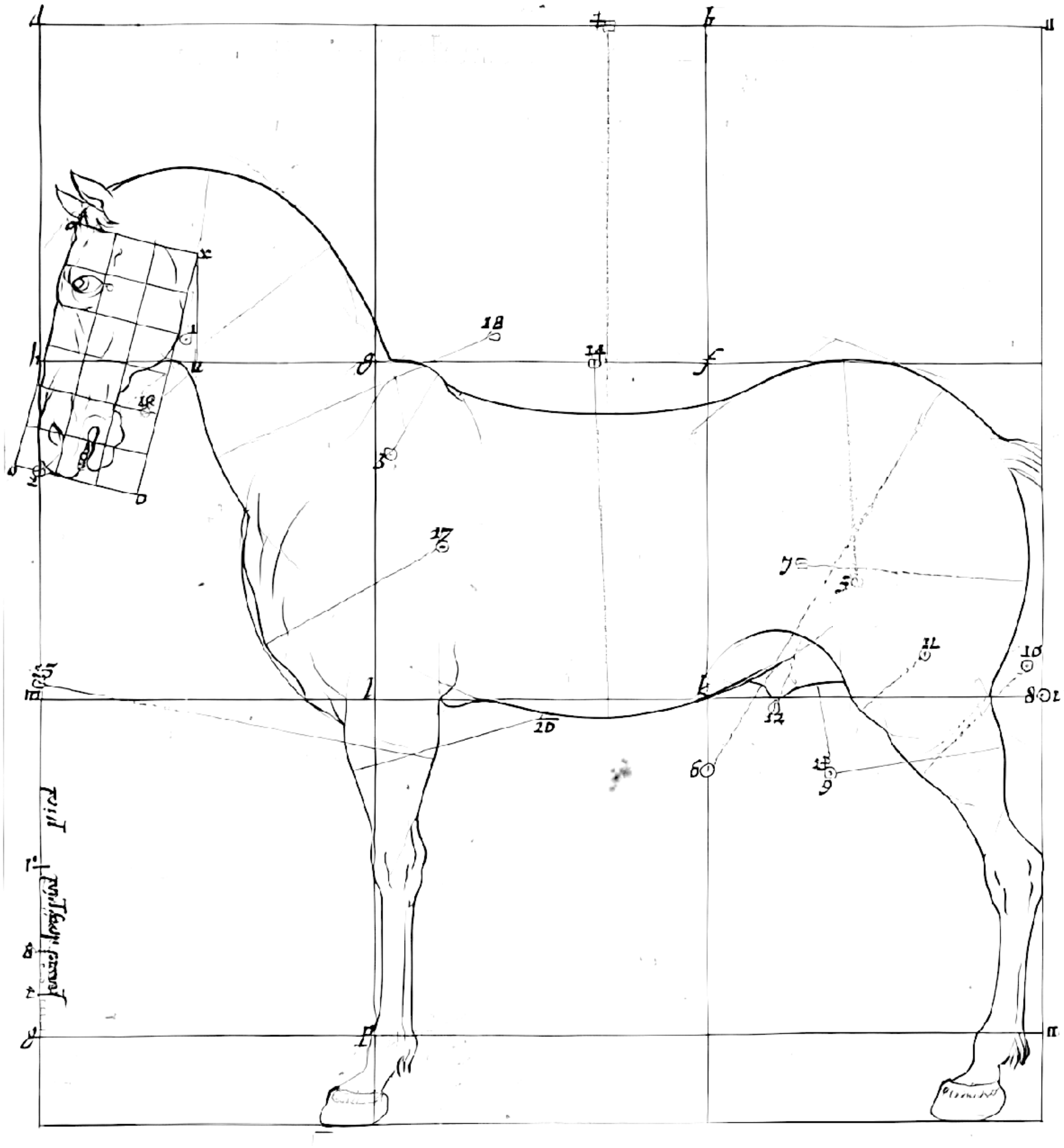
If I want the horse to look at the ground like in example 5, I make a square like 7, 8, 9, 2T, and perform the same operation. This is likewise for the other poses — always using T as the centre.

Now, back to the body of the horse. After forming the square marked X and O, and drawing the head as previously explained, you can draw the whole body down to the knees and hocks using a compass. For example, start from the top of the neck and follow around to beneath the throat.

First, take one and a half inches and set it half an inch from K to get point /. Place the compass there, extending to F just above the ear, and draw from side G over the top of the neck to point Z. Then draw from Z to G, the centre marked 1, which is one foot and two inches from K.

To draw the top of the shoulders, the centre marked 3 is half a foot and one inch from Z. And so forth for other parts — all the centres are marked with numbers up to 19, which gives the final line under the throat.

The compass openings are marked with hidden lines. The thigh length from G to the knee and hock is one foot, and the lower legs are also one foot. From the hoof to the tip of the toe, extend the square downward by half a foot.



The Method for Drawing the Horse from the Front and Rear by the Practice of Geometry

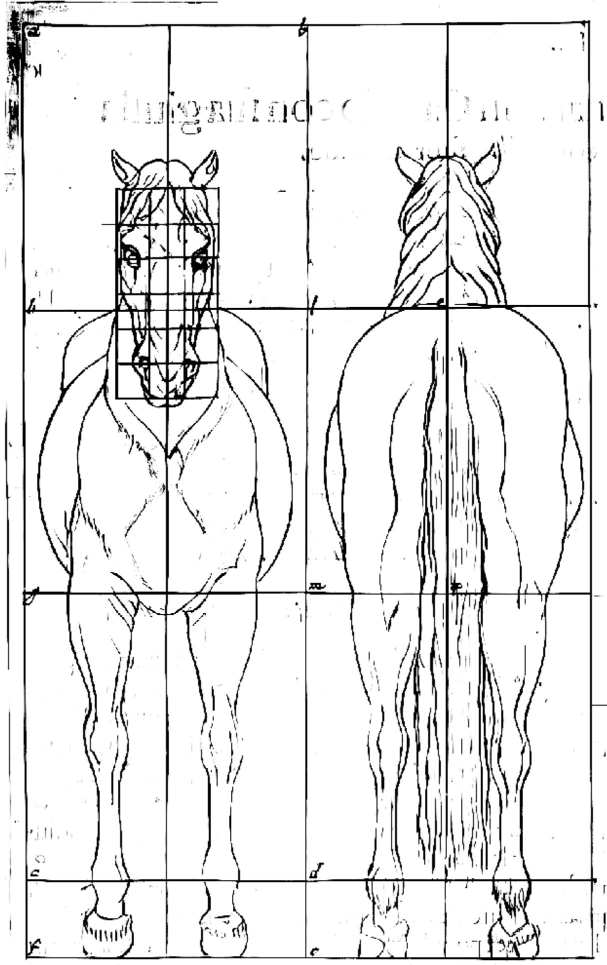
To draw the horse from the front, you must make a rectangular square like the one described earlier, with its width being one third of its height, as in A–B–C–D, with the same extension at the bottom as in F–E. Then divide the square A–B–C–D into three equal parts like A–H–G. Place above and below point H the same sections that were used in the previous example above and below H, and draw them parallel to the ground. Then, raise a vertical line in the middle between A and B — that is, between L and A — and you will have the two points I and I. On these two points, draw the same square as before (marked X–O–O–U), within which you will draw the head as shown in this example.

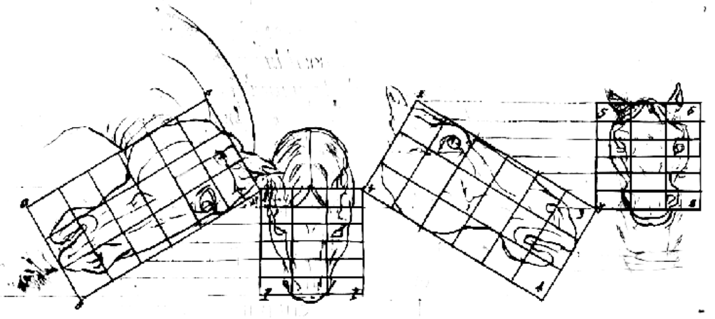
Then draw the body inside the square H–G–L–M, which is now the same square as in the previous example marked E–F–G–H–I–J. Draw the thighs and legs in the square G–M–C–D, and the feet in C–F–D–E. These match the parts of the other square described earlier.

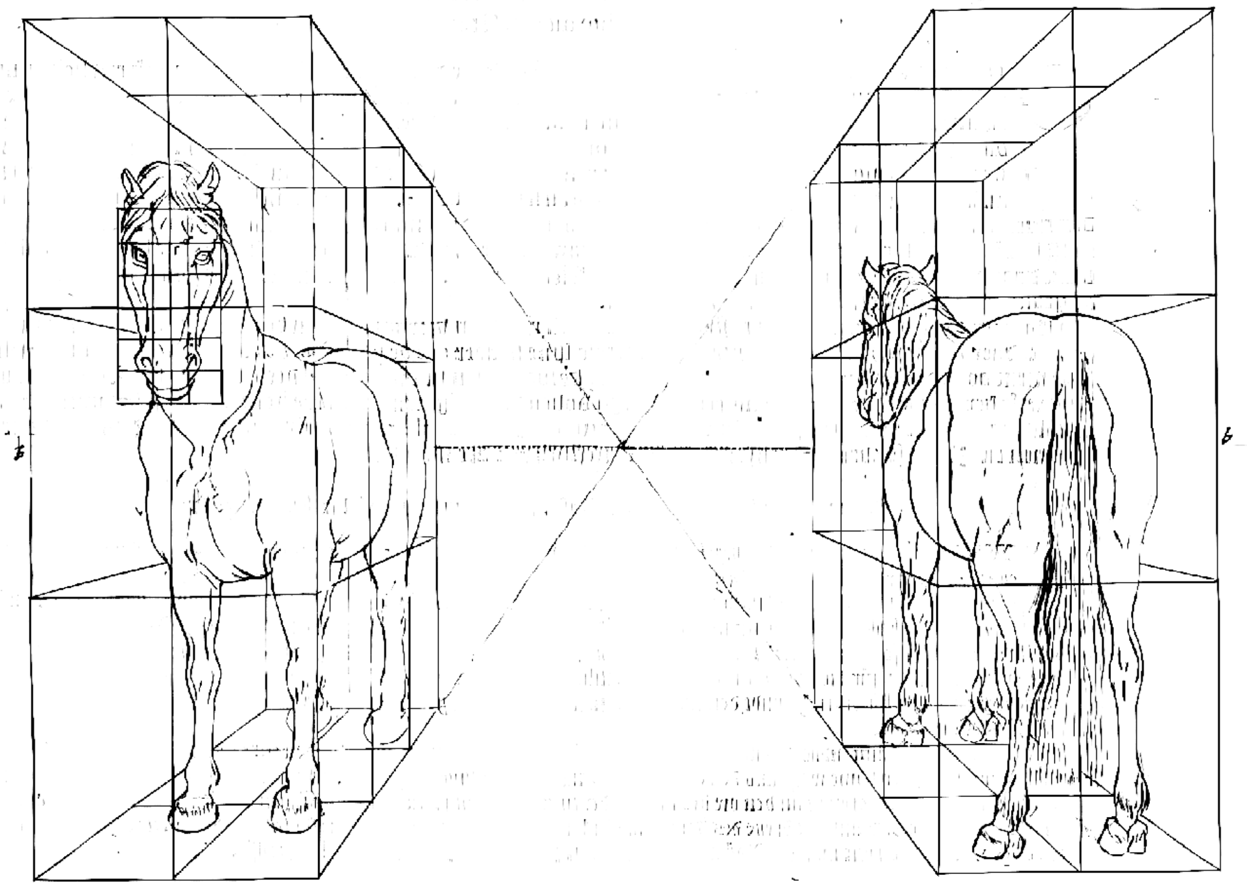
To draw the horse from the rear, use the same method. Construct the same square, and carefully note the position within the square I–J from the previous example where the horse's rear was drawn. Place that same rear section on the corresponding location on the line N–O.

As I've drawn here the horse's head from the front view, I assume that the head is positioned vertically over the ground, as in square X–6–4–5 from the previous example within the circle. If you want the head to be like the one in square marked 4–6, and viewed straight from the front, it will appear in foreshortening, as seen in the figure marked 4–6. But if the head is raised, as in square 1–2–3–4–7, and also viewed from the front, it will also appear foreshortened, like the head in square 5–7–6–8. In this way, one can find all kinds of fore-shortenings.

Here you see two horses shown in foreshortened perspective. Anyone familiar with this art can easily see the construction: the viewpoint is at point I–J; the horizontal line upon which distances are placed is just outside the example.


a
b
h
l
g
m
n
c
d
f
e





Horse Freehand, With Its Proportions and Measurements Without Using a Ruler or Compass

To avoid spending too much time with the ruler and compass, I have found an even easier way to quickly draw a horse with accurate proportions, freely and by hand. All these technical subtleties serve more for the curious than for painters or those drawing from life. One only needs to memorise these measurements.

To make this quicker and more practical, I begin freehand by sketching a square, which I divide into nine equal parts, like this: 1, 2, 3, 4, 5, 6, 7, 8, 9. I draw three circles: the first for the buttocks, the second for the belly, and the third for the shoulders.

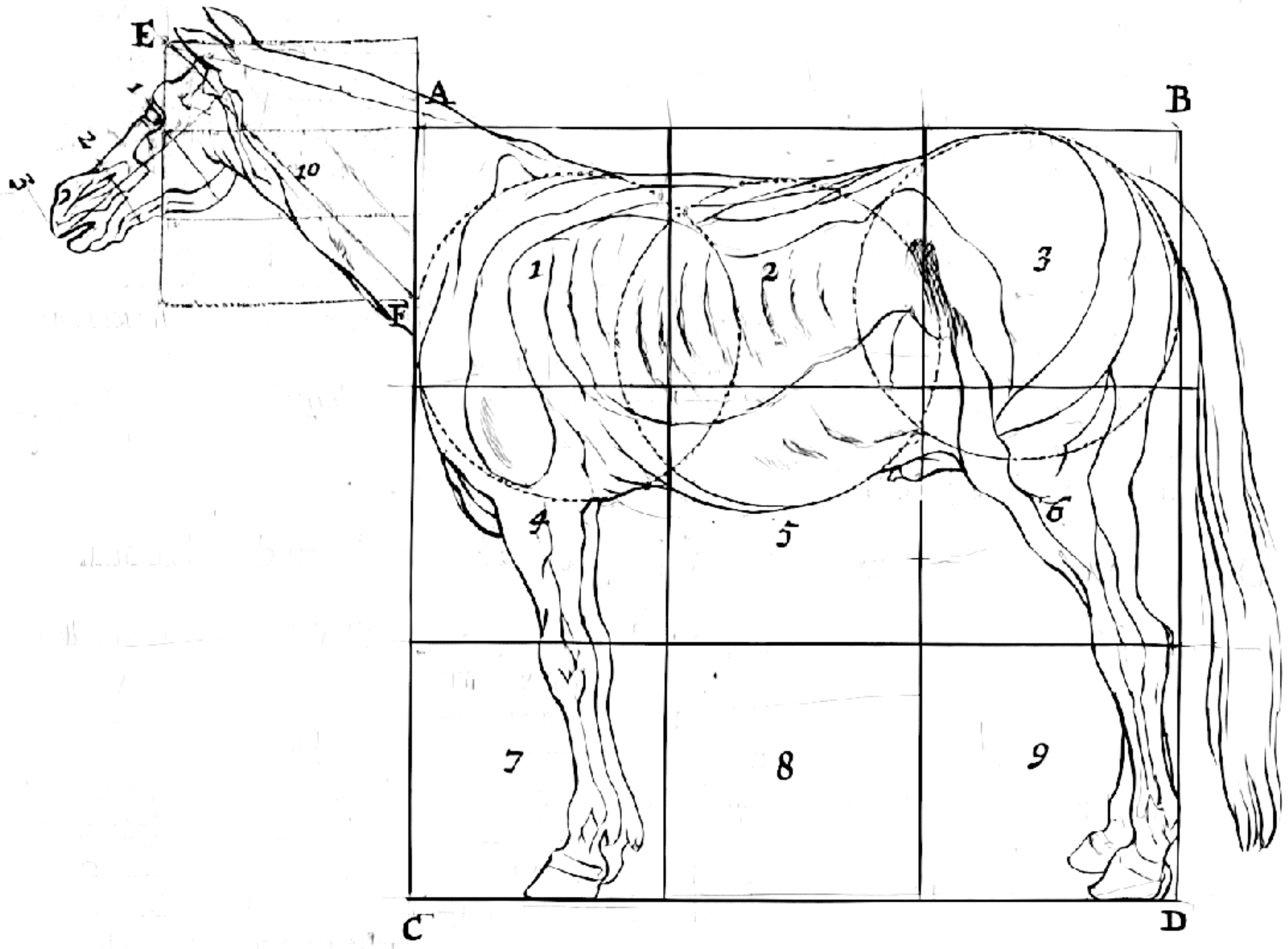
To locate the shoulder joint and the end of the belly, I divide sections 4 and 5 into three parts — the third part serves to place the shoulder joint. For sections 7, 8, and 9, this marks the position of the knees. The base, marked T–D, represents the ground line or the placement of the hooves.

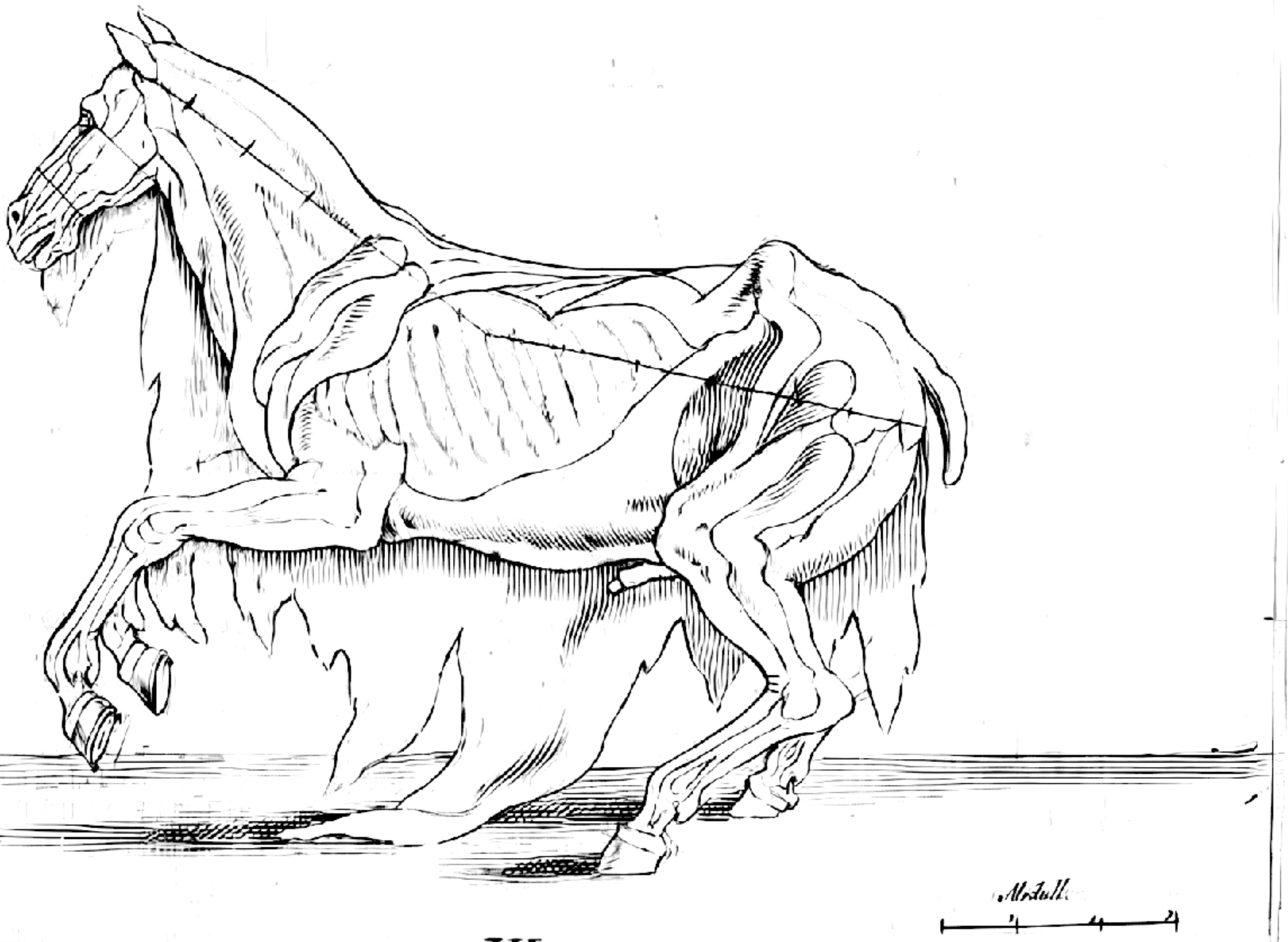
Now, to form the head, I draw another square — this is field ten — where I sketch the neck. Points E and F and the diagonal line help locate the ear's position. This same diagonal also gives the length of the head, which I divide into three equal parts:

- The first part marks the position of the eyes.
- The second part sits just above the nostrils.
- The third part ends exactly at the mouth.

The width of the head in profile is taken as one of these measurements, aligned precisely along a straight line between the two eyes.

This, in brief, is how one can draw a horse freehand, without the aid of a compass.


E
1
2
3
10
A
B
F
1
2
3
4
5
6
7
8
9
C
D



III

It is very difficult for a man to create anything with perfection if he does not know its origin and foundations; consequently, it is very difficult to draw a horse properly without understanding and knowing its muscles, veins, and arteries.

To that end, anyone who wishes to become truly proficient in drawing must frequently study from life, making multiple anatomical sketches of animals in order to become fluent. Yet care must be taken not to become overly accustomed to this, nor to make the mistake that many painters do — drawing all their animals with such an obvious display of internal structures that, instead of depicting living animals, they are in fact drawing anatomical diagrams.

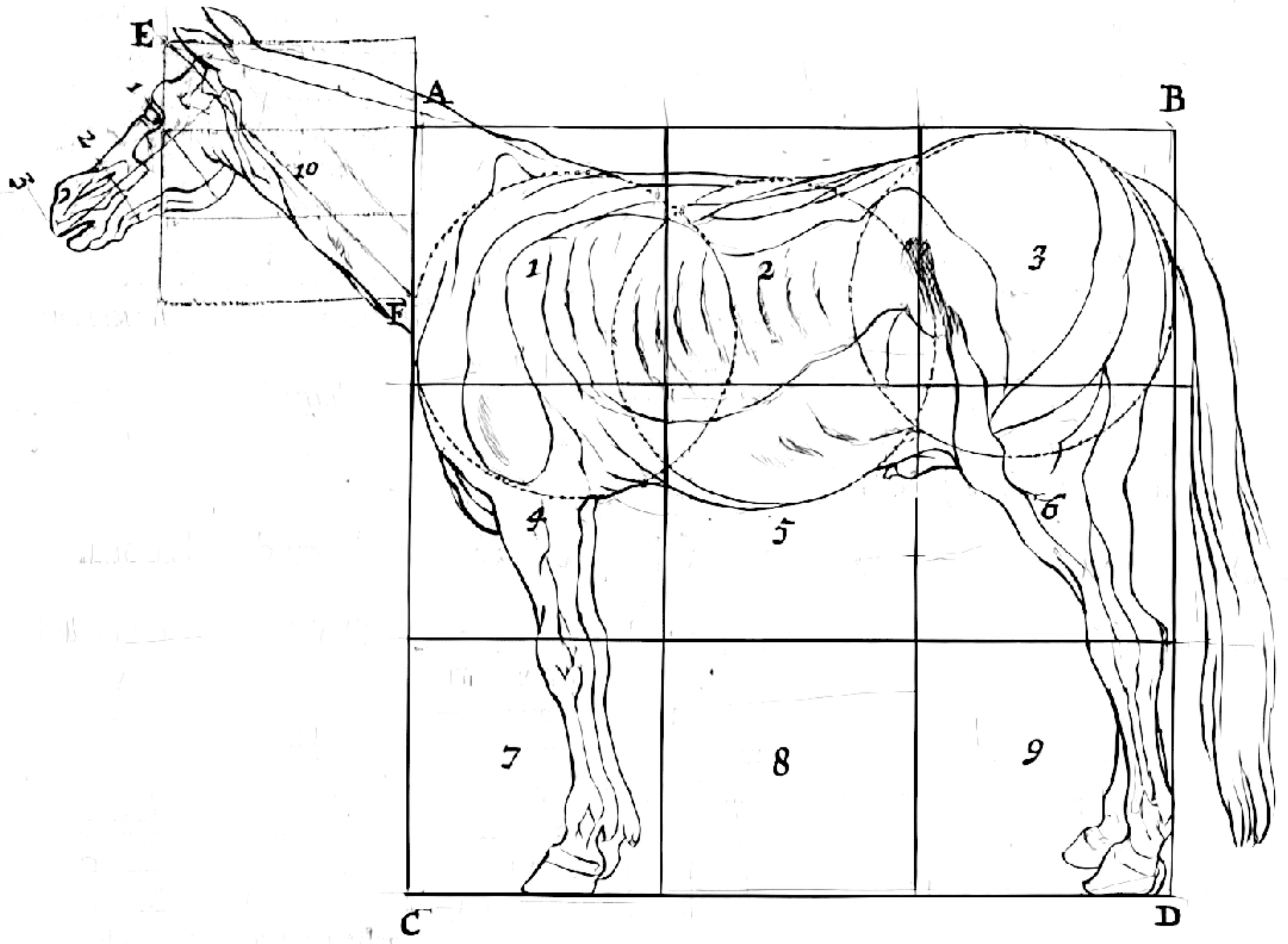
This error is particularly noticeable with horses, which are robust animals and show very little of their internal form, except in the legs and the sides of the head. Nevertheless, to draw them well, one must have all these parts well memorised, especially those that shift — such as the shoulders and the legs — for, being a highly mobile animal, if you do not understand the proportions and the movement of its internal forms, then when the horse shifts position, you will become confused and unable to complete the drawing correctly.

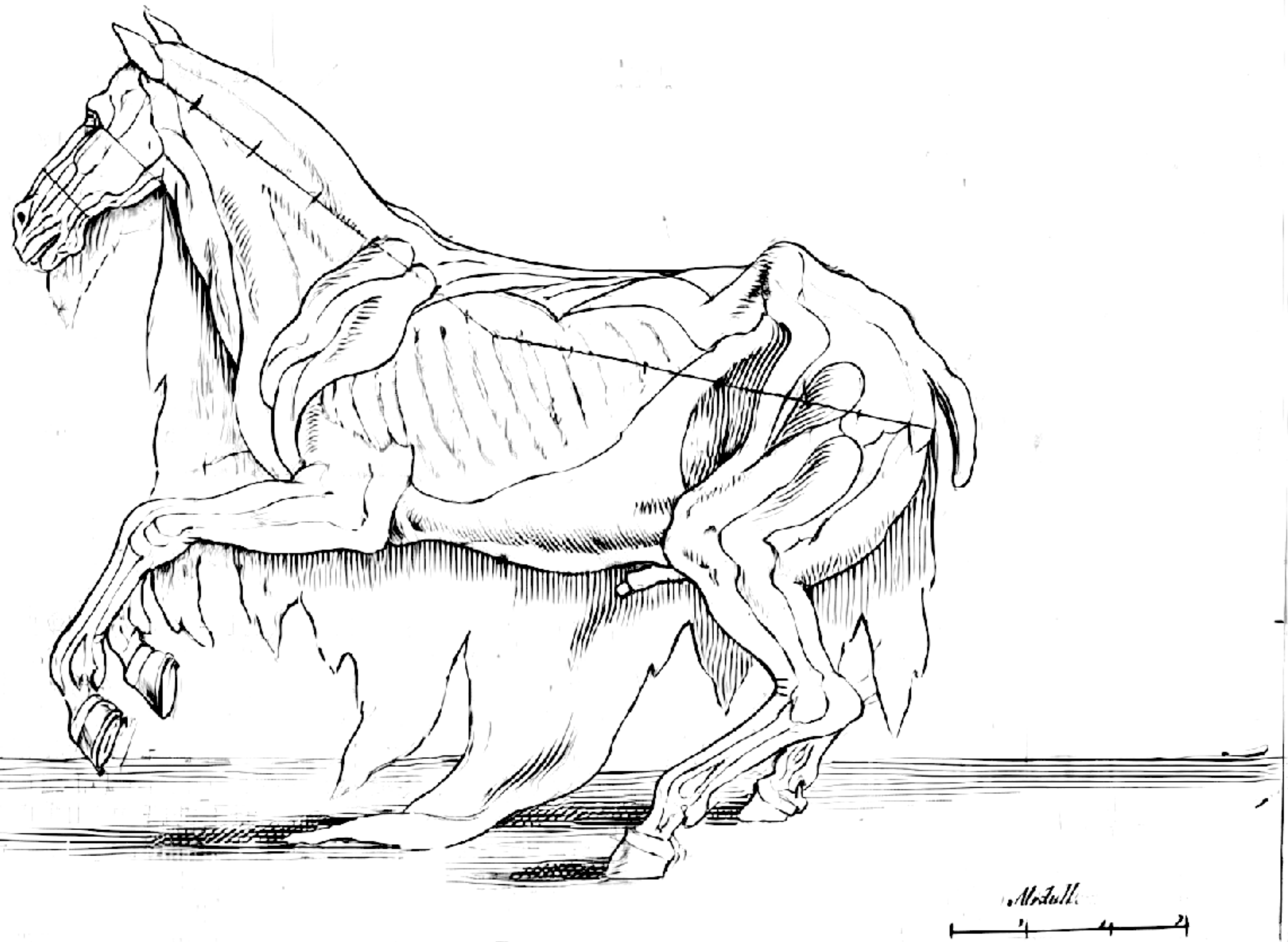
This has happened to me many times during my study at the Royal Academy of France.

This is why we will note here that:

- The muscles of the shoulder (A) change immediately as the horse lifts or lowers its leg.
- The hindquarters (B) shift with the movement of the hind legs and feet.
- The neck (C) bends, and its muscles tighten or stretch accordingly.

The rest can be learned through observation and experience.


E
A
B
F
C
D
1
2
3
10
1
2
3
4
5
6
7
8
9

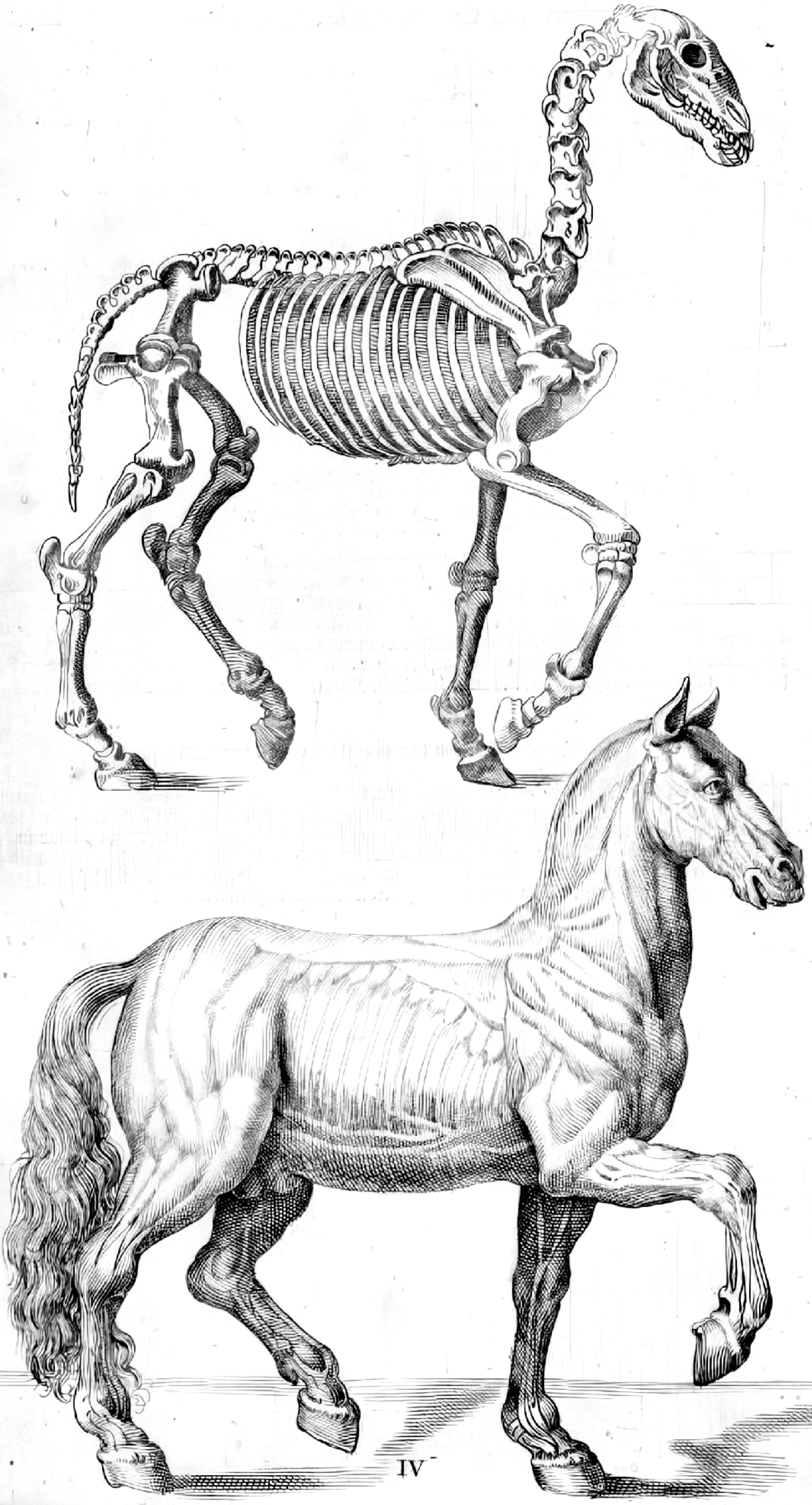


III

An Easy Method for Drawing a Horse

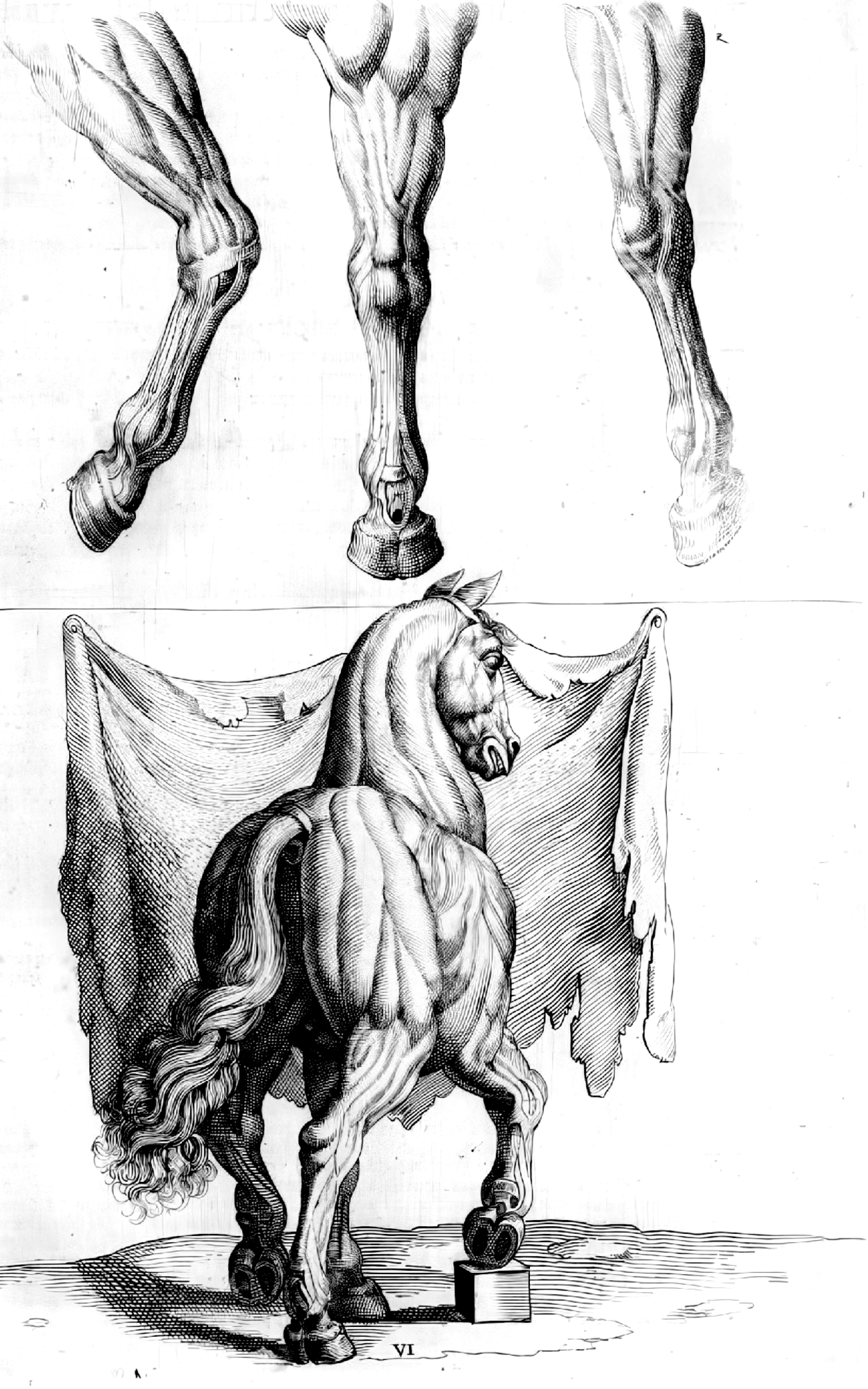
Having previously said that to draw a body—whether human or animal—well, one must first study anatomy, I have accordingly illustrated the anatomy of a horse in profile. And here I now represent it from the front, so that one can clearly observe and understand the muscles of the chest, the nerves of the legs, knees, and feet, the arteries of the neck, the muscles of the head, and the placement of the eyes, nostrils, and other parts, including their foreshortening.

To show all of this more clearly, I have also drawn the feet and legs separately—for the perfection of horse drawing lies especially in the accurate rendering of the leg muscles.



IV

I also present here the anatomy of the horse from behind, so that one can observe the muscles and the shifting forms of the haunches, the nerves of the hocks, along with their extensions and contractions—particularly those I have marked on the haunches with A and B—those which stretch and fold according to the movement of walking, and which are the most changeable of all. I have also added the feet and legs separately, and I believe this suffices for the anatomy of the horse.

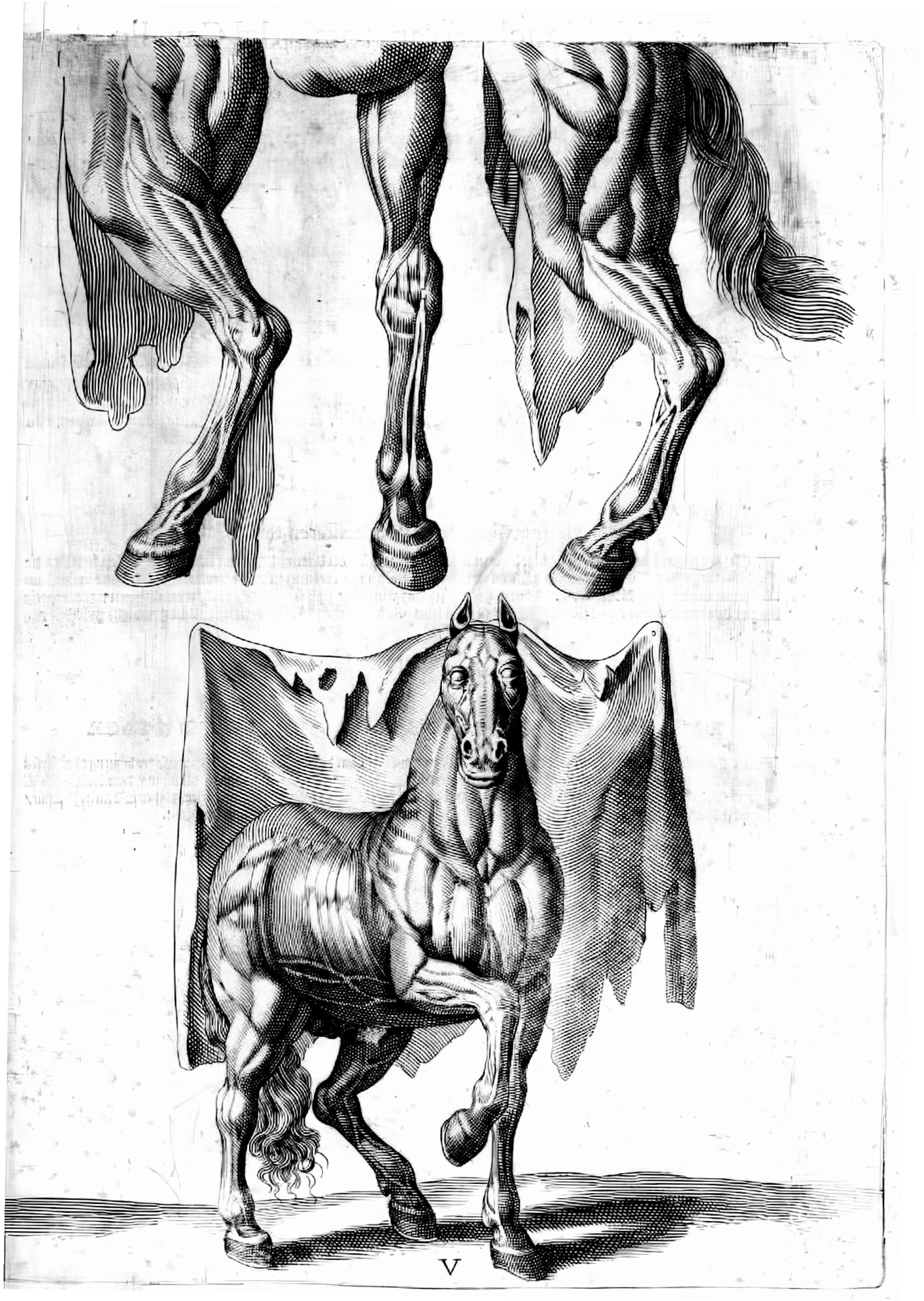


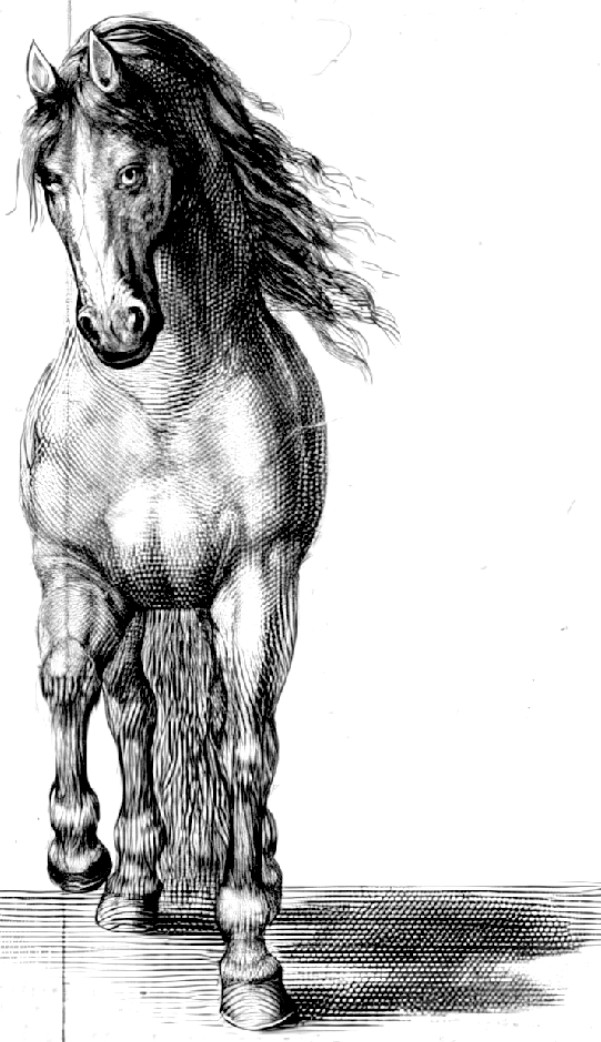
VI

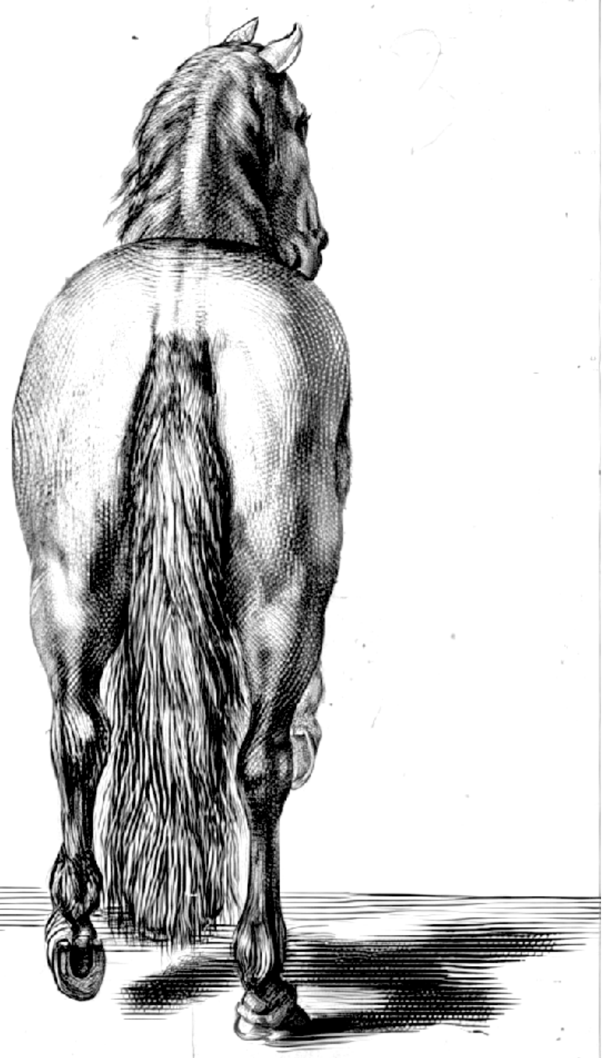
The horse is the most perfect in beauty and other perfections among all irrational animals. That is why, after having previously shown the methods of depicting it with compass and proportional systems, I will now offer some guiding principles for representing it with its beauty and grace—not as a draft horse, but as a parade horse.

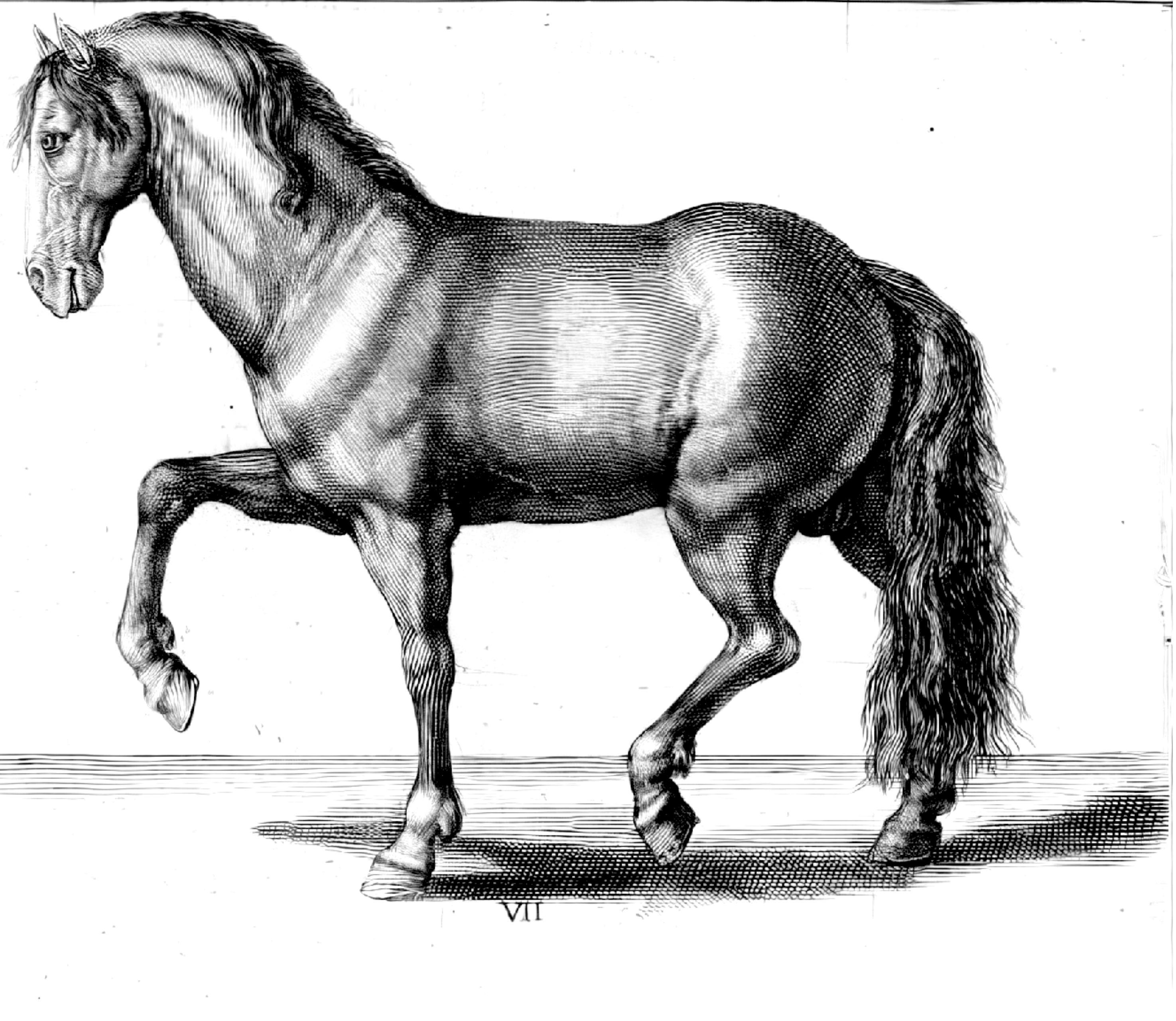
Having already made sketches of the horse, as I showed earlier through the compass and other methods that follow, one must draw its head dry and lean, well proportioned in muscles, veins, and nerves along the sides and the jaws. The mouth should be slightly large, the ears upright and pointed, the nostrils open, the eyes bold and alert. The neck should be long and wide, with folds and expressive curvature, arched like a swan's neck, the mane flowing, the shoulders fairly broad, the belly not too large, the haunches rounded and polished, the tail long and trailing, the legs and thighs lean and sinewy, and the joints of the knees, hocks, and feet not too large, but delicate.

For the horse seen from the front, the head should appear fine, the chest broad and well developed, and the legs slightly spread and positioned upright.



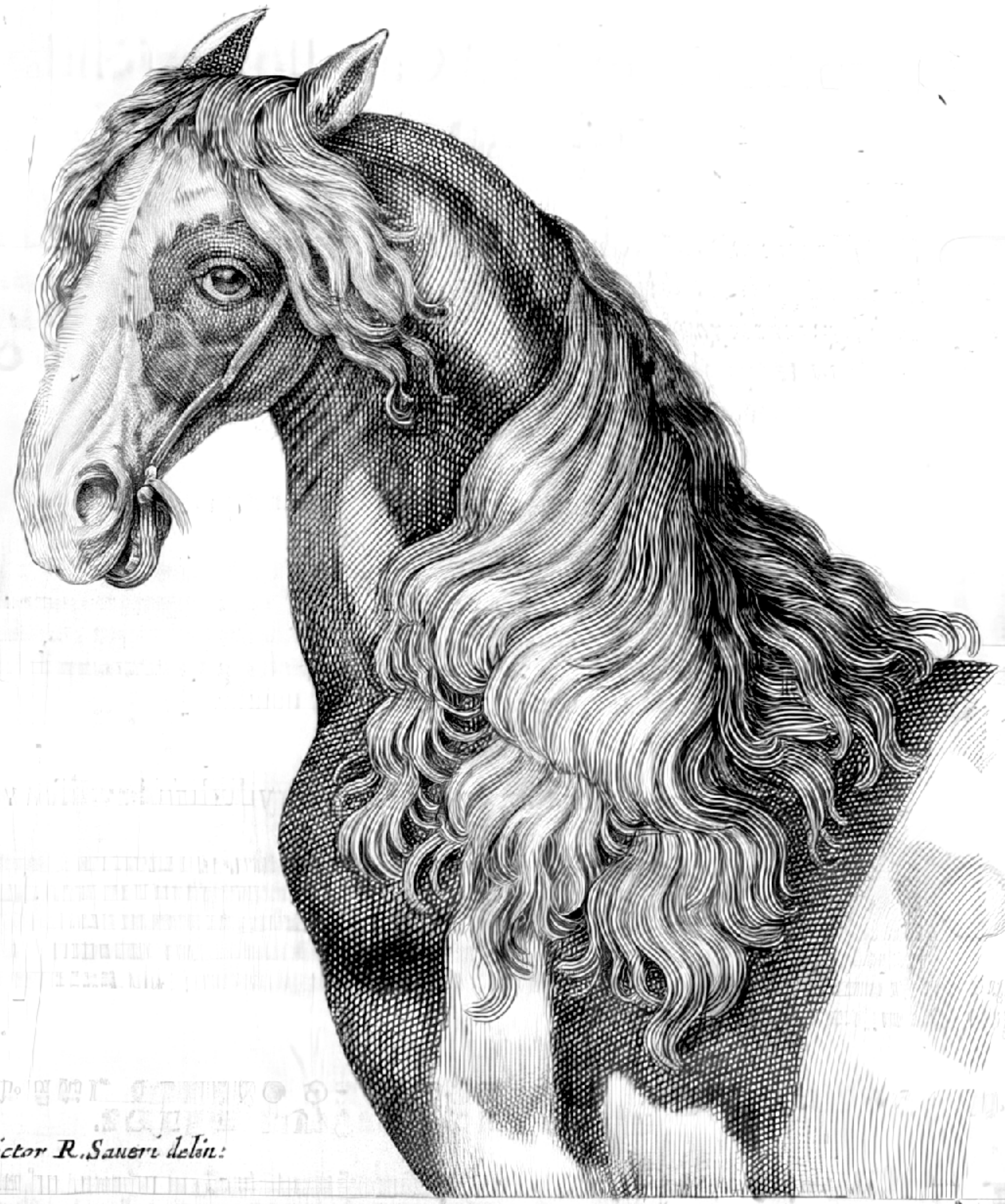




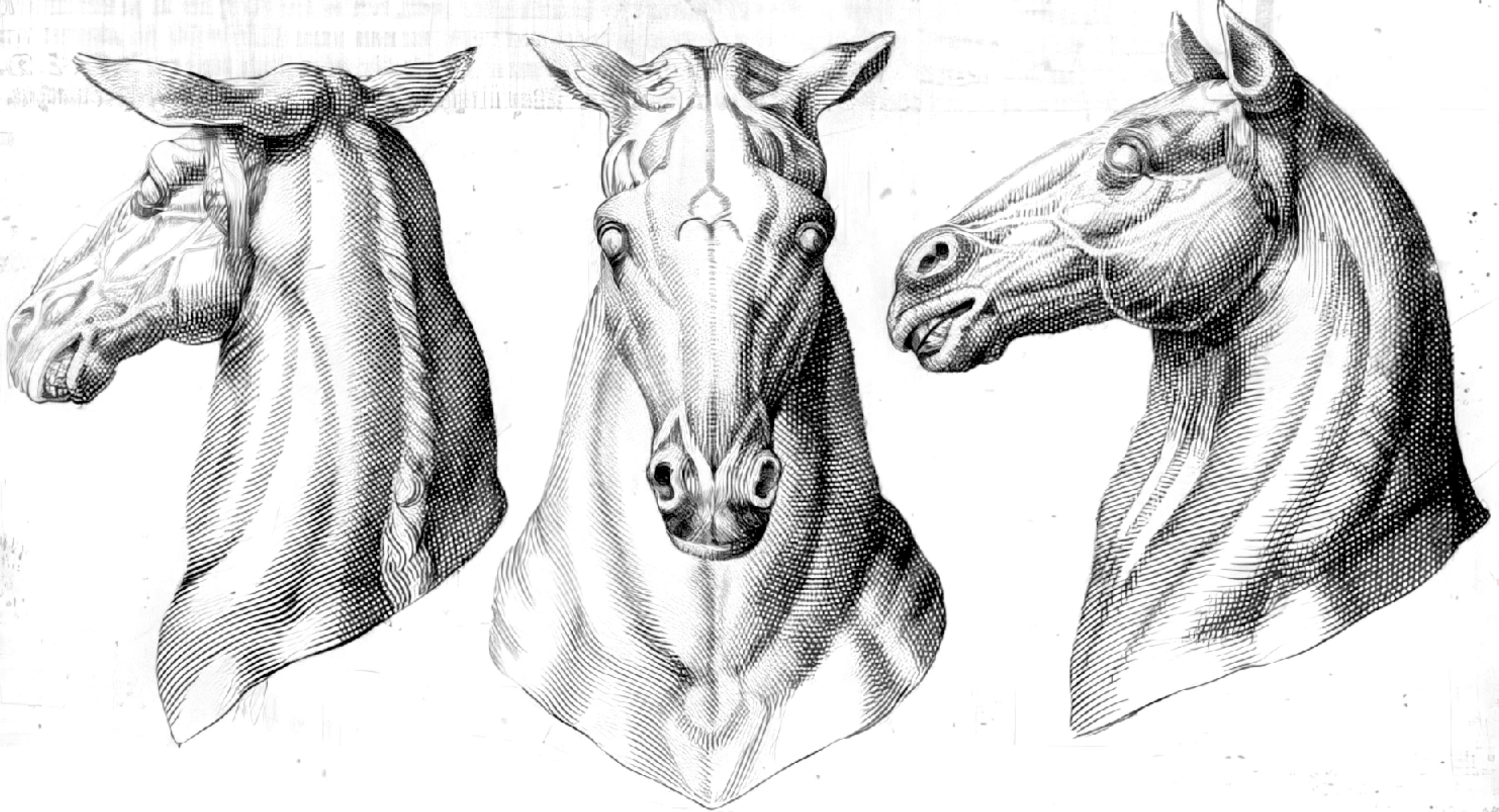


VII

To better express my intention to young learners, I have here shown half of a horse drawn from life, according to the drawing by Zauari, so that those who practise drawing horses may better understand all the muscles, arteries, and veins of the head and neck, as well as the joints and their grace. For it is easier to reveal subtle details in a larger scale than in a small format.



S. Caeſ: Maieſt. pictor R. Saueri delin:



VIII

To draw a horse running with grace, it is essential to observe three things. Namely:

- The hind legs should have the characteristic motion of a running dog or greyhound.
- The head should not be raised too high.
- The hind legs must be well extended.

As for the front legs, they should not be too stretched out, nor too bent.
The muscles that stand out the most in such movement are marked A, B, C, D — on the haunches, neck, and shoulders.

But in the end, experience is the true master.

Here is Represented a Horse Running in Three Ways

To draw a horse in motion gracefully, it is important to observe three key elements:

1. The hind legs should have the quality of a running dog or a greyhound — fully extended, but without the head being lifted too high.
2. The hind legs should be stretched well behind, while the forelegs should neither be too extended nor too bent.
3. The most prominent muscles to emphasise are marked A, B, C, D — across the haunches, neck, and shoulders.

Ultimately, experience is the true master.

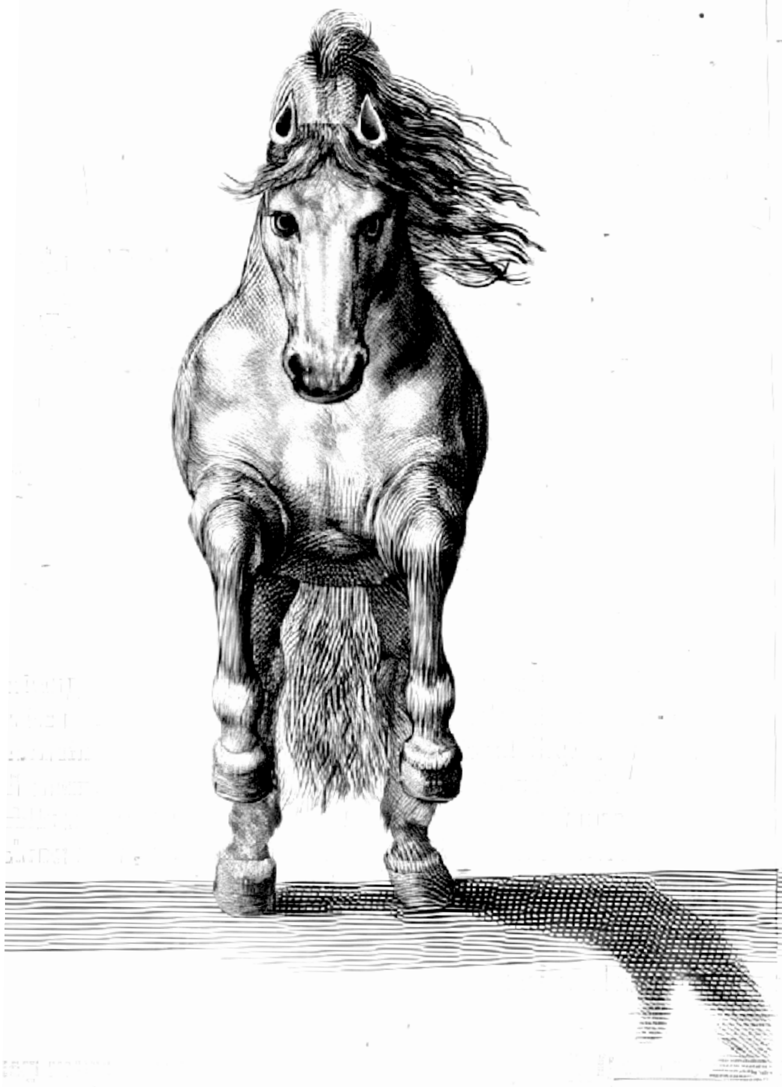
I have likewise found it worthwhile to represent the horse leaping, both to convey a graceful movement and to reveal the muscles engaged during such forceful motion — which are the most prominent when the horse is in action.

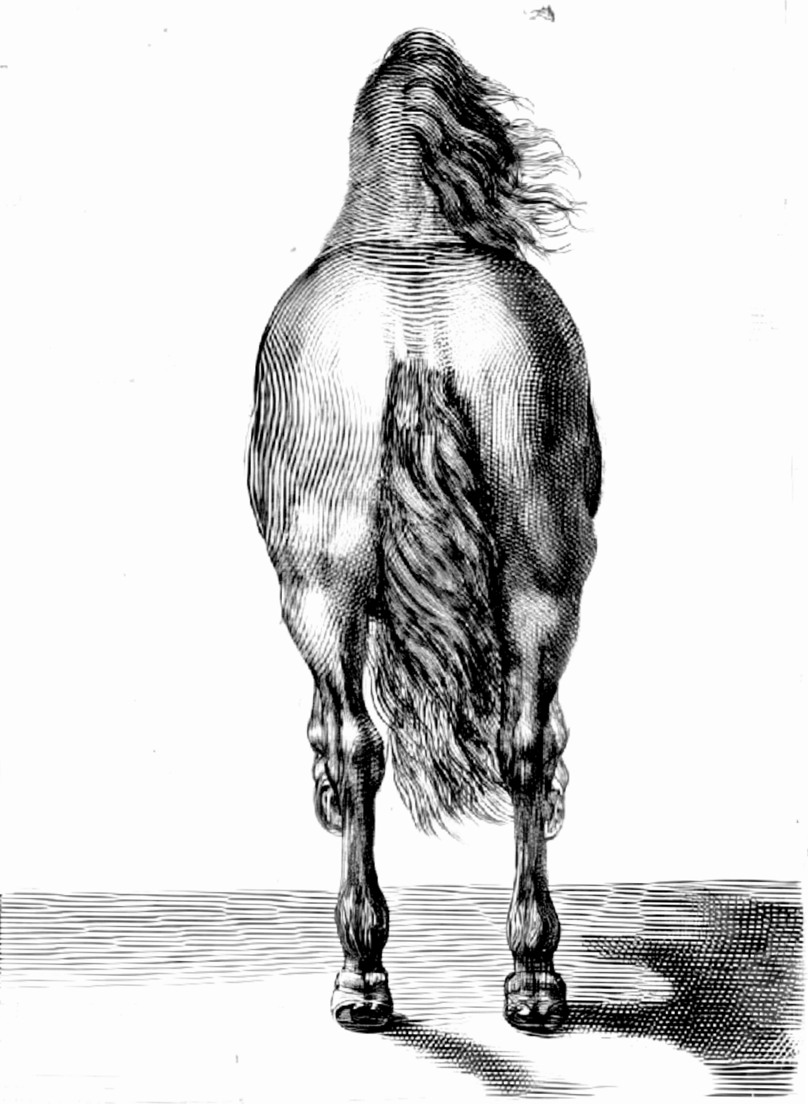
It is very necessary, for anyone drawing a leaping horse, to correctly plant the hindquarters directly under the hips, so they fall nearly in a vertical line beneath the centre of the body. This allows the horse to push its full weight through the hind legs.

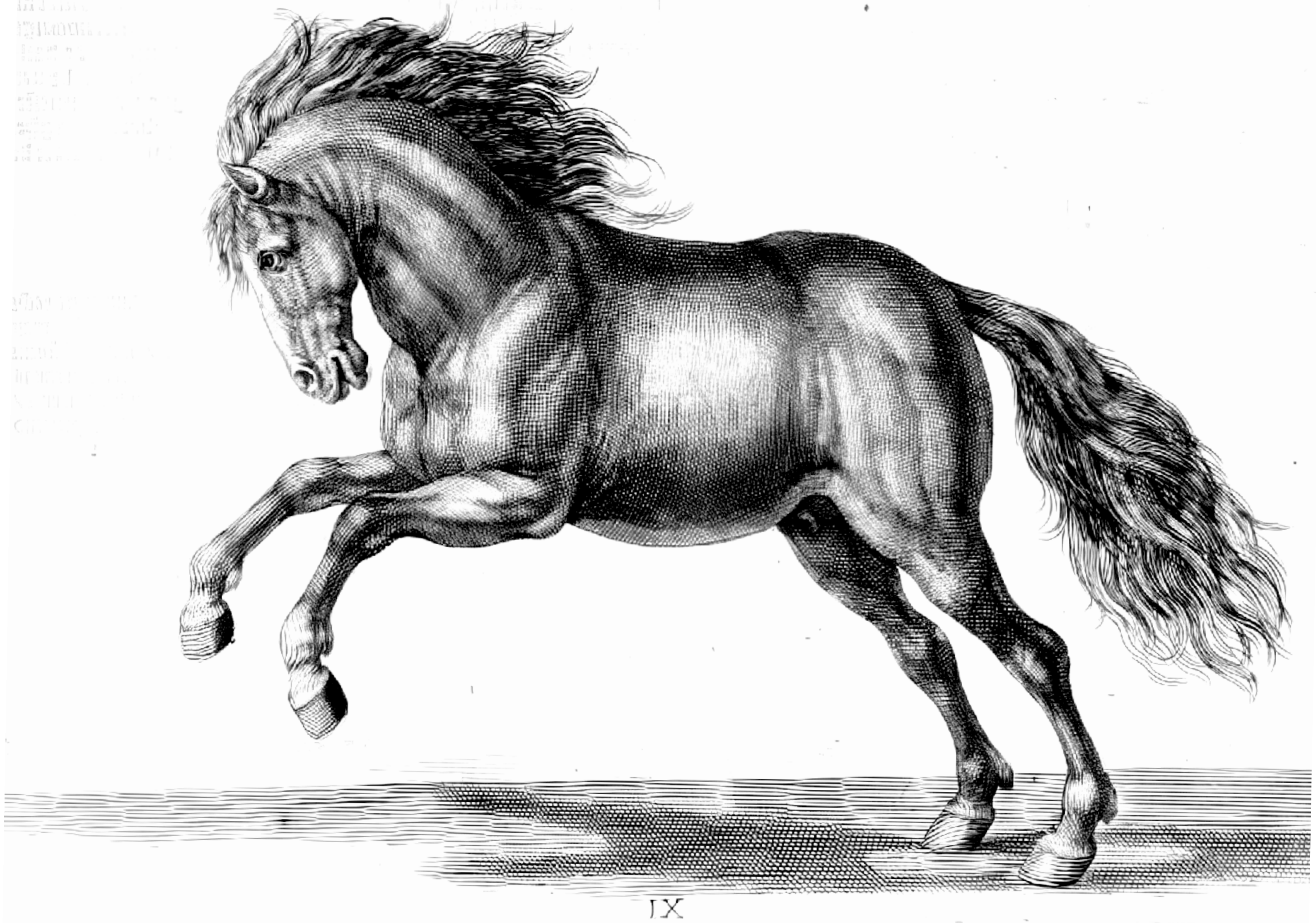
The head should be slightly raised, the mane flowing lightly, and the forelegs gently bent.

The most prominent muscles in this action are those I have marked A, B, C, D on the haunches, and E, F, G on the shoulders. These become especially visible through the tension created by the leap.

The rest is learned through practice.







IX

DESCRIPTION OF THE IMPERFECTIONS AND IDEAL FORM OF THE HORSE

The horse is the most perfect in beauty and overall excellence of all irrational animals. That is why, after having shown earlier the methods for drawing it with the compass and according to its proportions, I will now offer some guiding principles for representing it with its full elegance and grace — not as a workhorse, but as a ceremonial or parade horse.

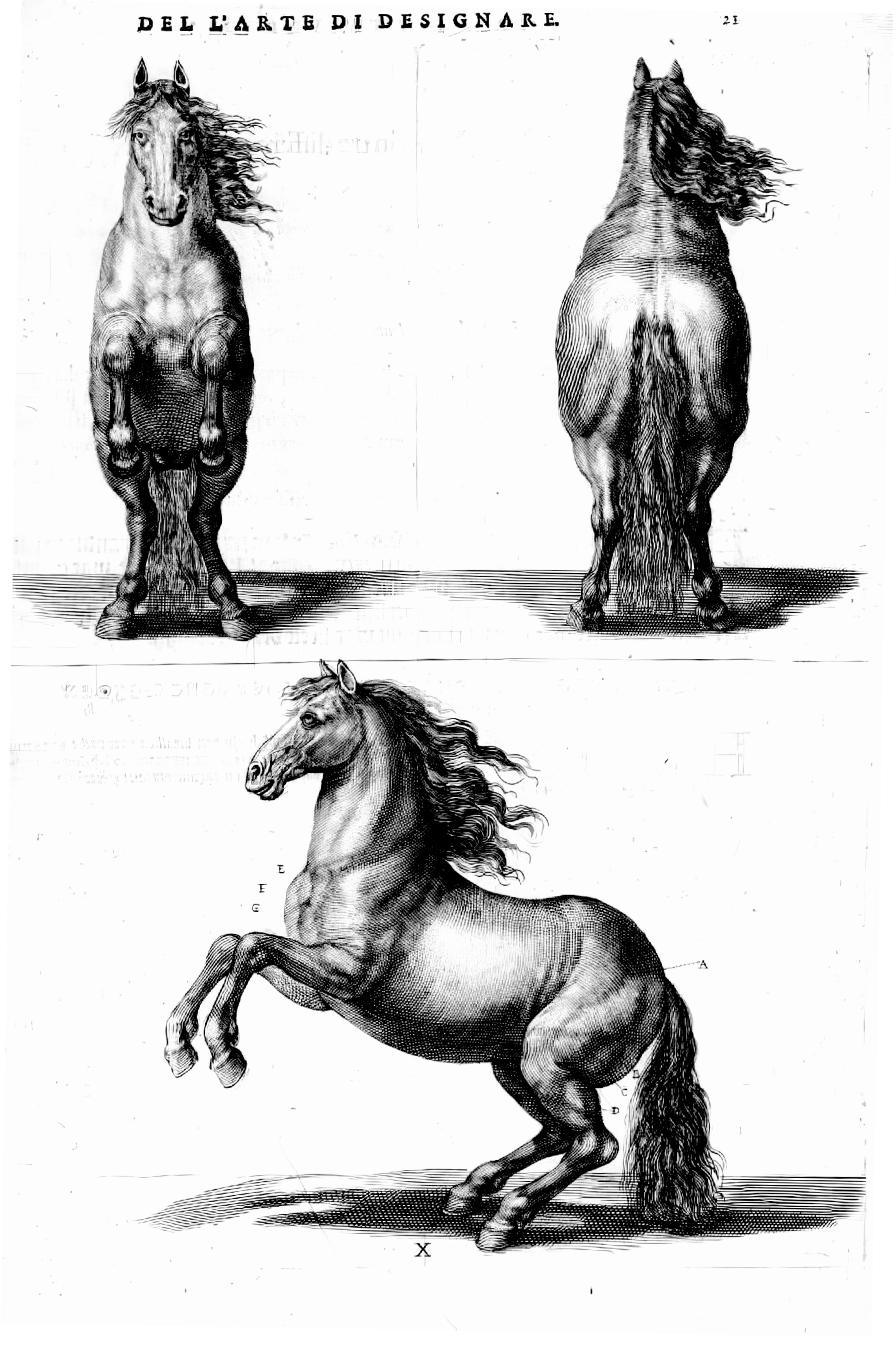
Having already carried out the preliminary sketches of the horse, as I have demonstrated earlier through compass methods or other approaches that follow, one should depict:

- The head lean and angular, well defined with visible muscles, veins, and nerves along the sides and the jaws;
- The mouth slightly large;
- The ears upright and pointed;
- The nostrils open;
- The eyes bold and alert;
- The neck long and broad with folds and curves, arched like a swan's;
- The mane hanging freely;
- The shoulders fairly broad;
- The belly not too large;
- The flanks round and smooth;
- The tail long and trailing;
- The legs and thighs lean and sinewy;
- The knees, hocks, and hooves not too large, but fine and well shaped.

When the horse is viewed from the front, its head should appear noble, the chest wide and well developed, and the legs slightly apart and correctly aligned.

Here is Represented Half of a Horse

To better convey my intention to young students, I have included here half of a horse, drawn from life and according to the teachings of La Variante, so that those studying horses may more clearly understand all the muscles, arteries, and veins of the head, neck, and joints — as well as the horse's grace and elegance. For it is generally easier to show subtle details in a large format than in a small one.



How to Draw All Kinds of Birds Using a Simple Method Based on Mathematical Rules

Having in this fifth part treated youth who wish to practise and learn the art of drawing, I now present a true geometric method for drawing any species of bird. I have found no method more fitting or more accessible for teaching the drawing of every kind of bird — whether by rule or practice.

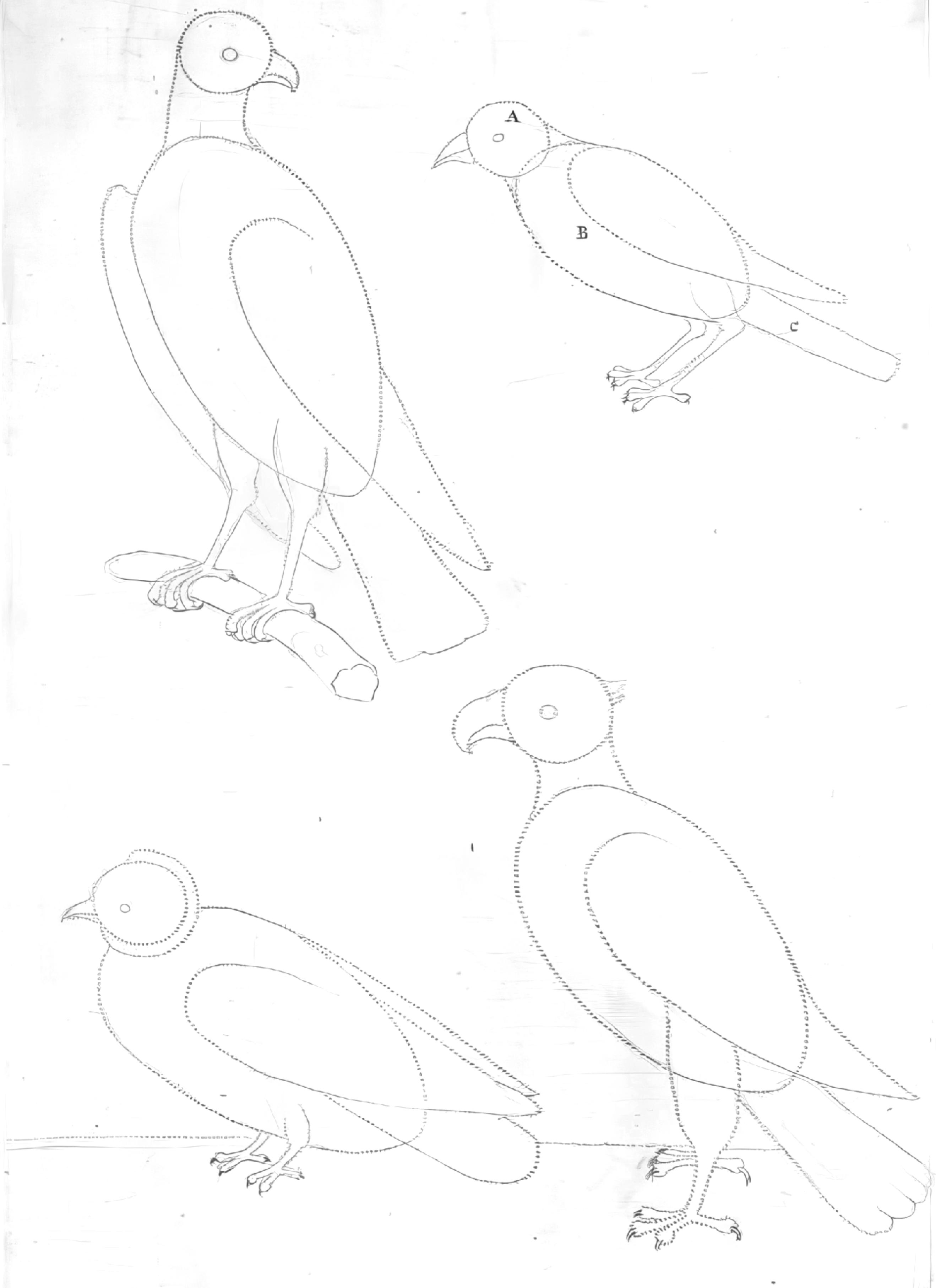
First, one must know that all created things in this world are governed by a certain proportion inherent in their design. Birds, being even more diverse in species than four-legged animals, can be approached through a general method with five representative models. These are: the eagle, the night heron, the swan, the stork, and the Indian rooster. From the proportions of these, we can derive the method for drawing all others.

First Example
For birds in general, using basic shapes

Through long study and observation of nature's secrets, I discovered that everything created by God holds a sympathy with Euclidean geometry. I observed this when a fellow student, without formal study, naturally drew birds on paper — not straying far from the principles I now teach.

This natural approach is the true foundation and method for drawing any bird with proper proportion. As illustrated in diagram A, begin with a circle. Add B, forming an oval shape for the body. Add C, a parallelogram representing the tail. From the middle of the body, draw lines for the legs and support, as shown in D.

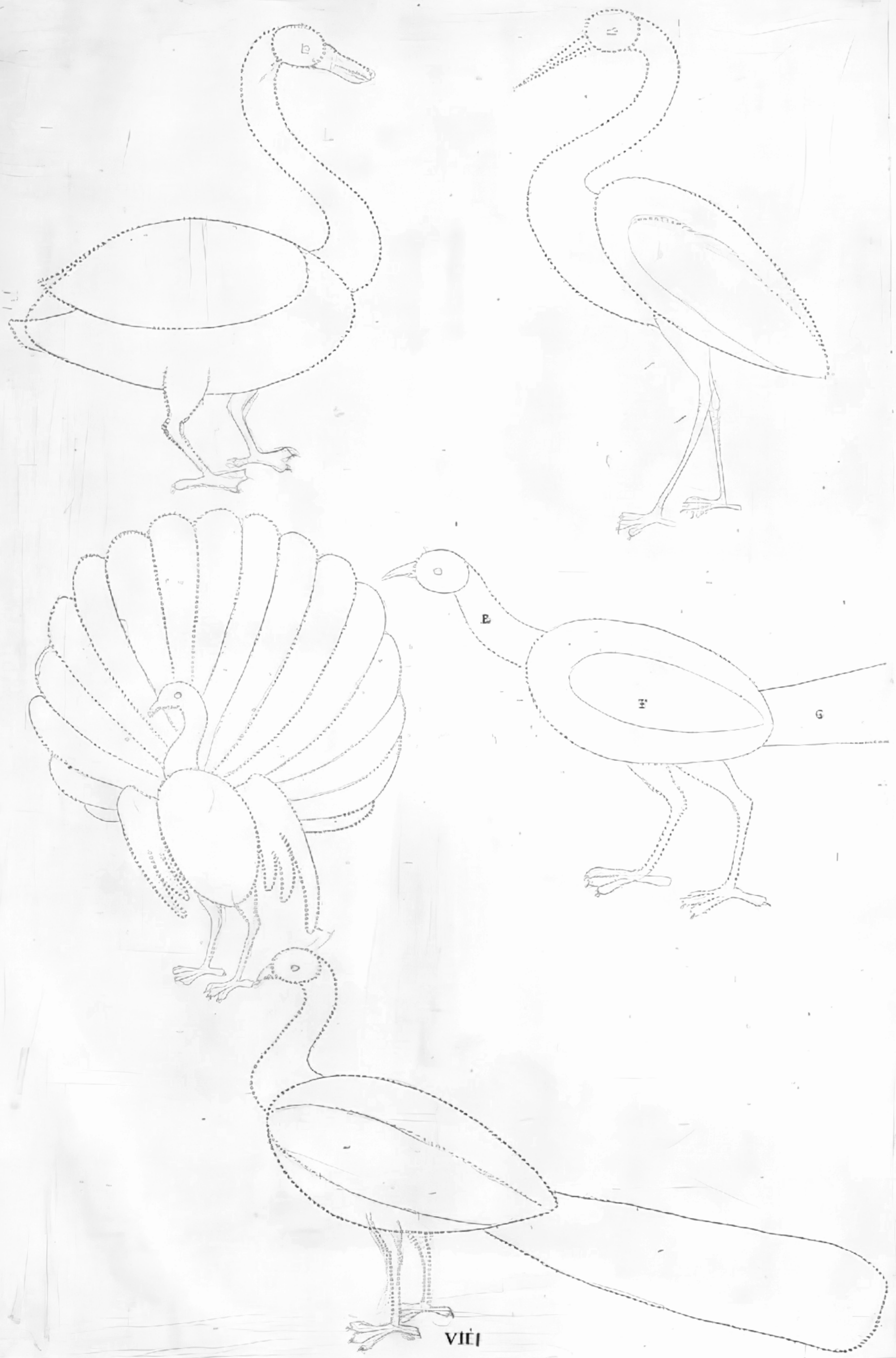
From this example, you can draw many types of birds — such as eagles, herons, parrots, and similar species.



I

Second Example
For birds with long necks

This method applies to storks, pelicans, ostriches, and all birds with long beaks and necks. These are drawn similarly to the previous example, varying mainly in the length of the neck and tail. The diagrams E, F, G show the specifics.



VIII

*Some examples missing images

Third Example
For swans, ducks, geese, and other waterfowl

The swan is among the tallest, heaviest, and most graceful birds in painting — especially when swimming. It is constructed from an oval as in the first rule, with the neck shaped like a capital “S,” as shown in diagrams H, I, K, L, M.

Ducks and similar birds follow the same structure, though often with rounder bodies and broader tails.

Fourth Example
For fowl such as roosters, hens, and partridges

These are generally constructed with a large oval, as shown in diagram N. The neck and legs are added as indicated in O, P, Q. The rest is learned through continued practice.

Fifth Example
On the motion and action of birds

I won’t expand too much here, as those familiar with animal movement can easily apply it to birds. Still, to aid understanding, I have included a plate with three key examples: birds standing on the ground, perched on branches, or in flight.

These examples serve well to teach how to capture every kind of movement.

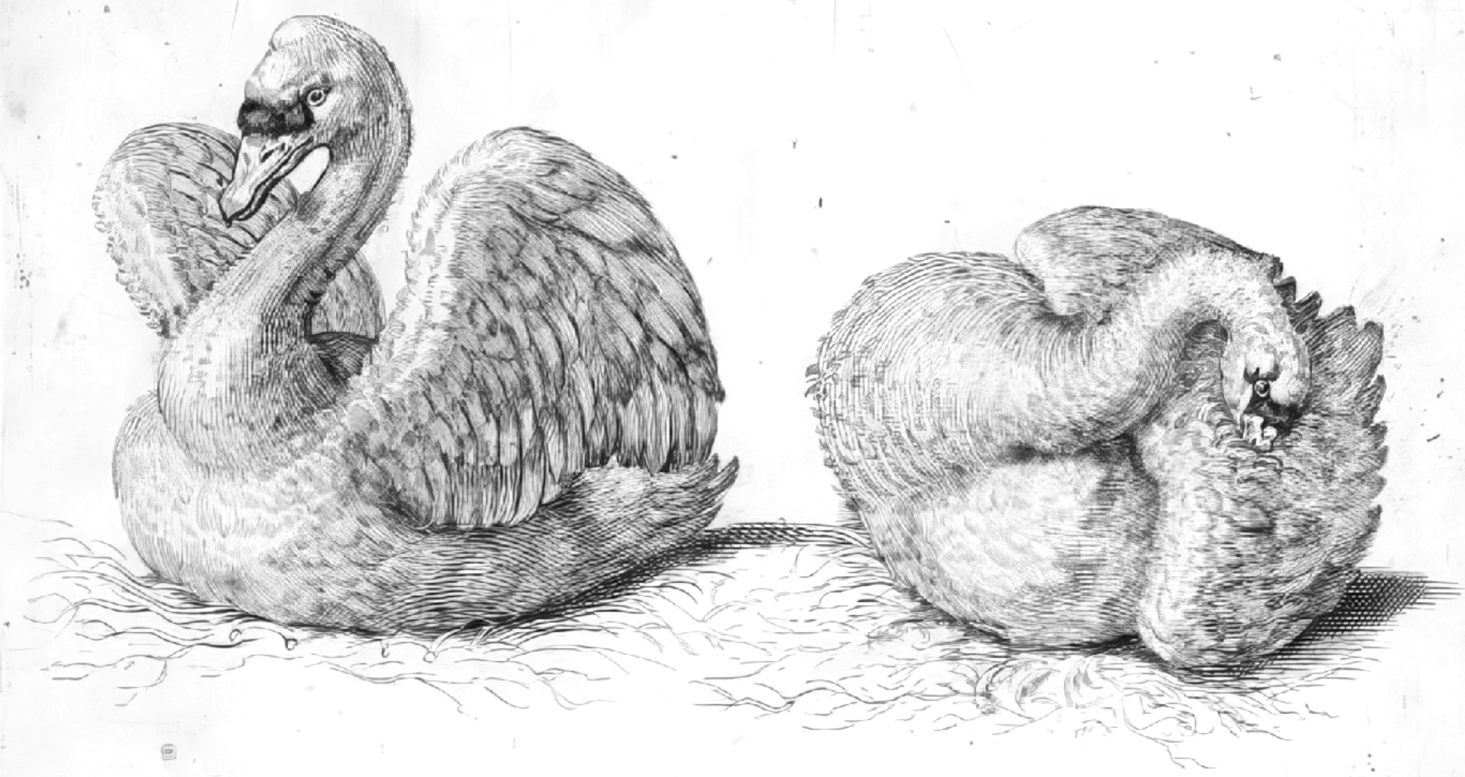
Special Instruction for Drawing Birds from Life

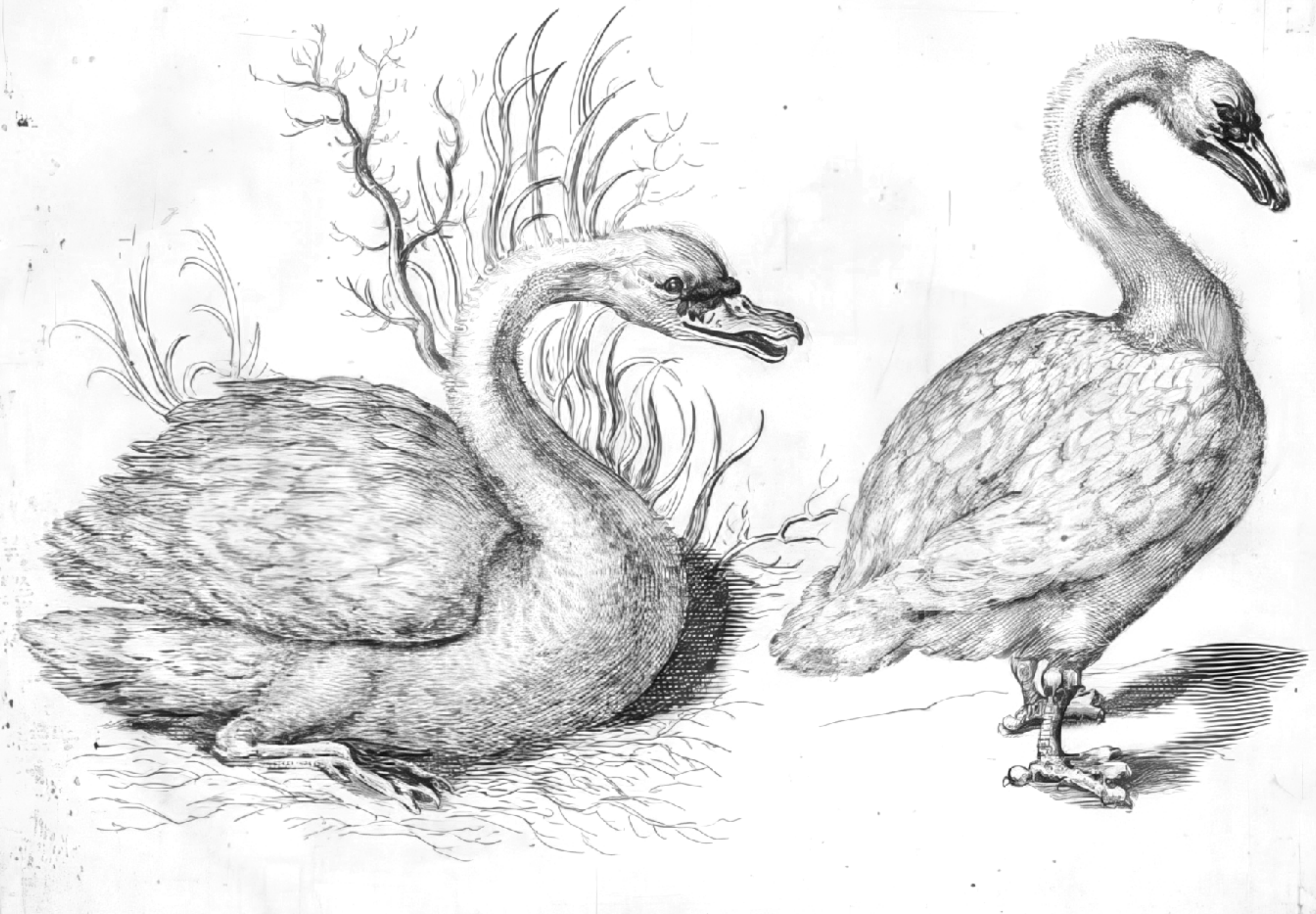
I learned from experience — and from great masters like Signor Scholten — how to draw birds from life.

Birds in captivity tend to be restless and fidgety. To draw or paint them well, begin with a quick sketch on paper, proportioned to their shape and height. Use light coming only from one side (ideally from a left-facing window), and block other light sources.

If the bird is alive, tie it gently with string to prevent movement. If dead, mount it with small nails to a board in the desired position for sketching.

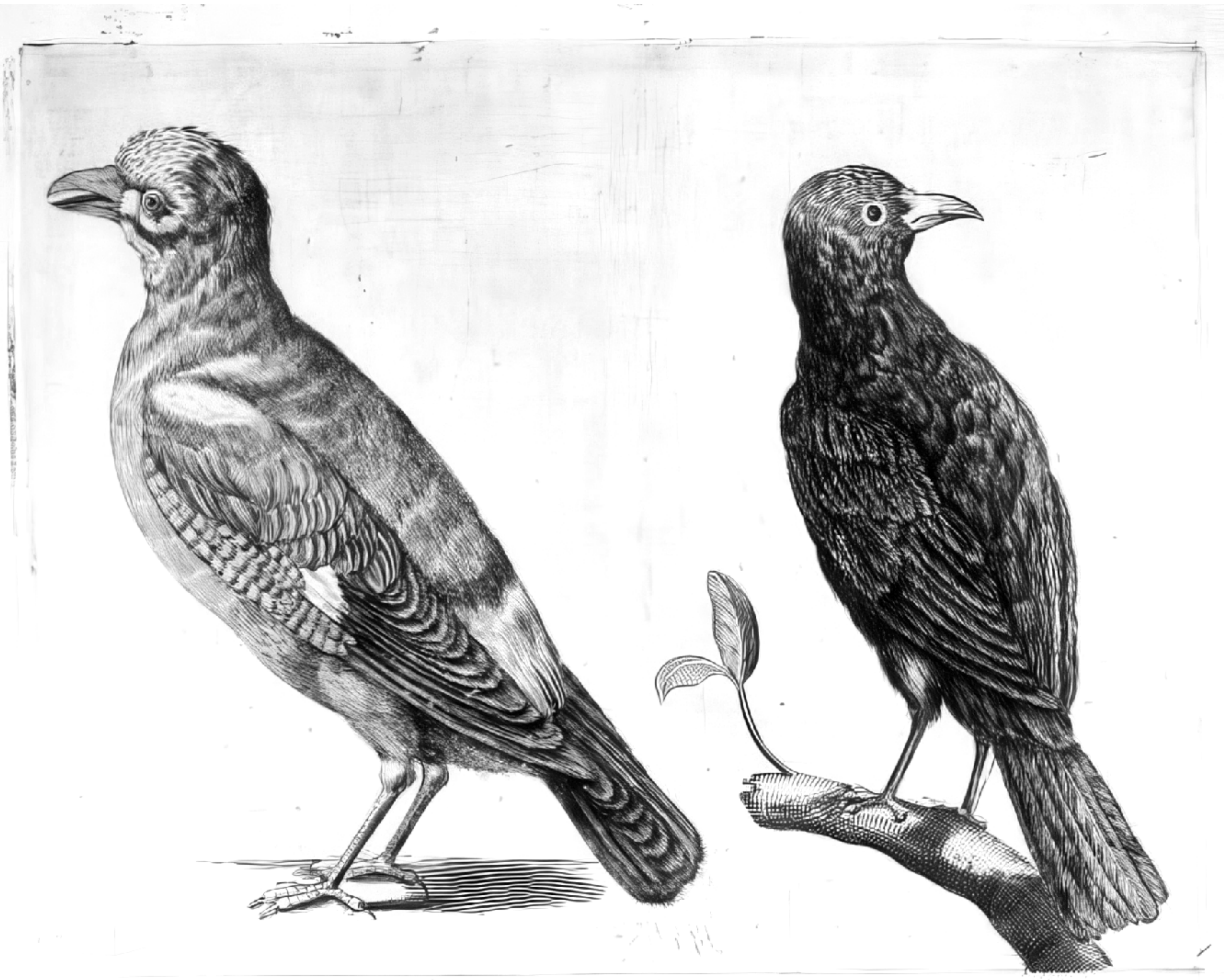
You cannot capture the animal’s full range of poses and expressions with memory alone — so to invent new compositions and postures, it is useful to frequently observe flight, movement, and behaviour. The rest comes with steady practice.

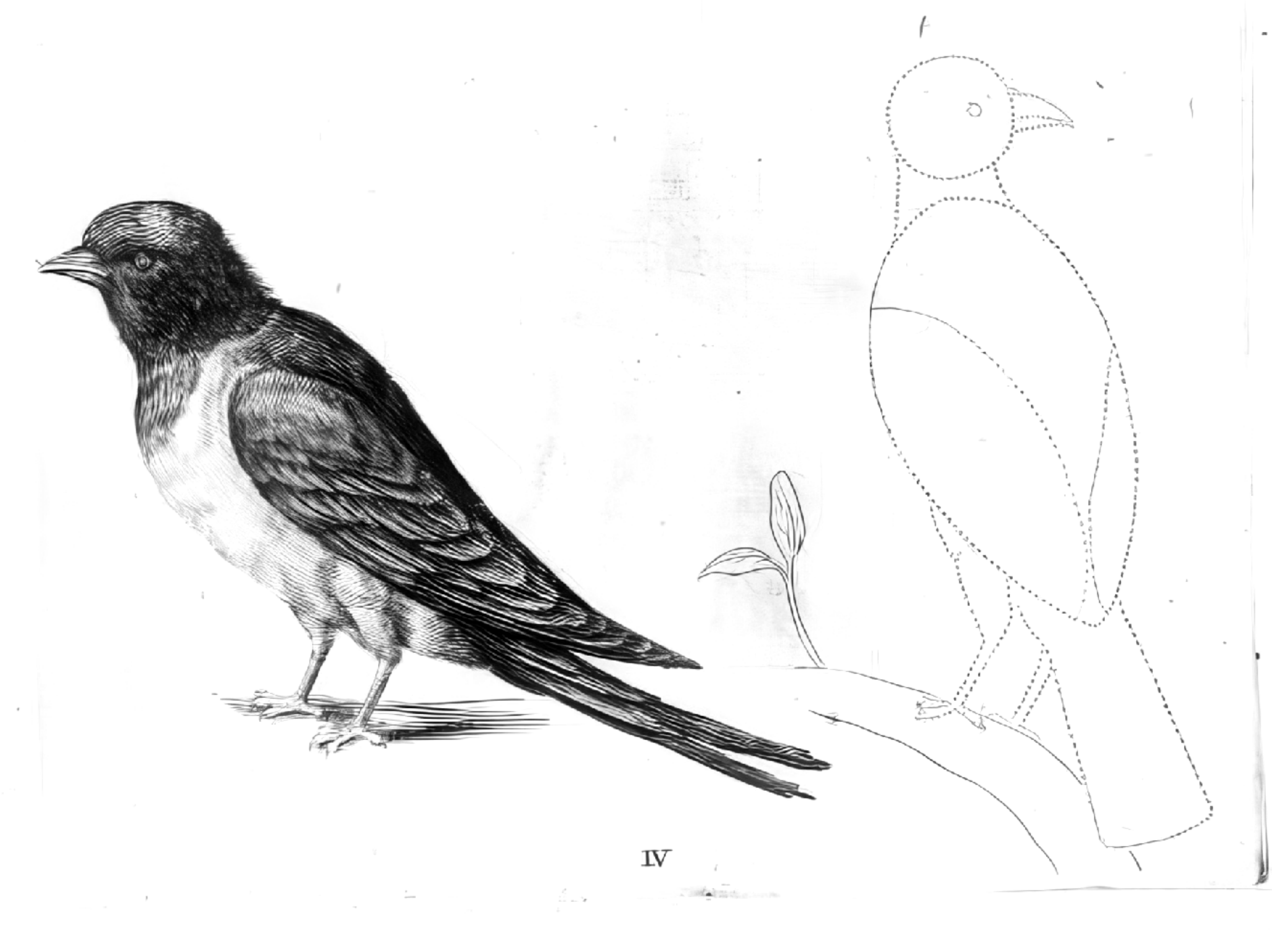




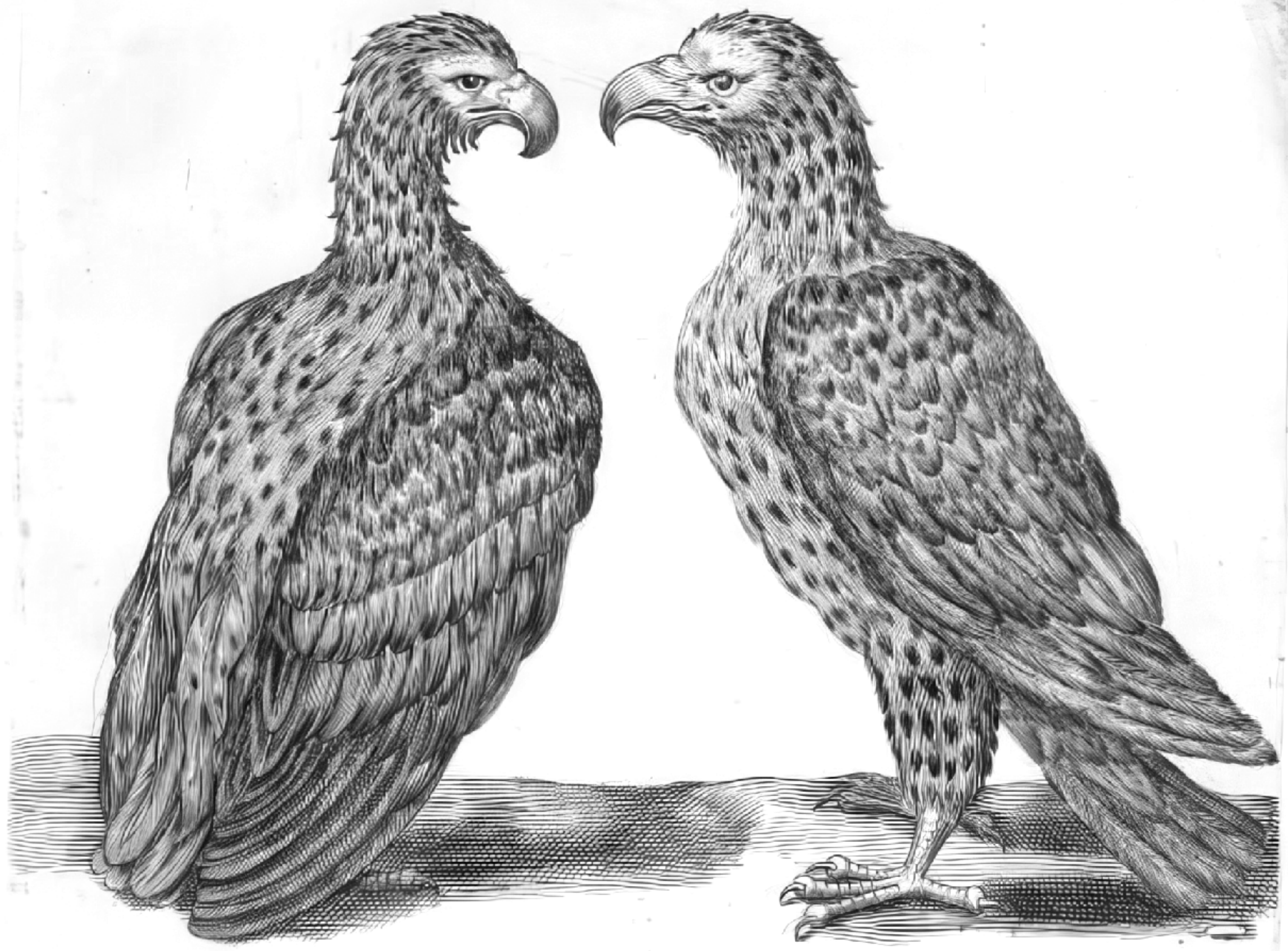
HK delin:

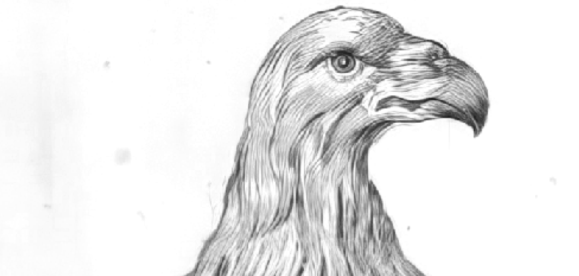
XIIII

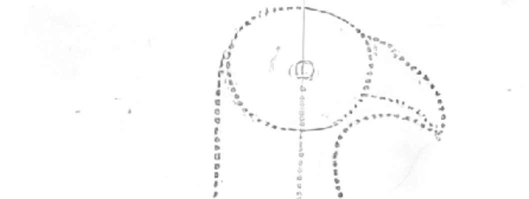




IV







XII

The True Method for Drawing a Cow in Profile, with Accurate Measurements and Proportions

To draw a cow, I propose here a square divided into four equal parts, as demonstrated by the points J, B, C, D. One of these parts (B to D) is then subdivided into three equal parts — marked B, E, F, D — and another (C to D) into four equal parts — marked C, G, H, L, D.

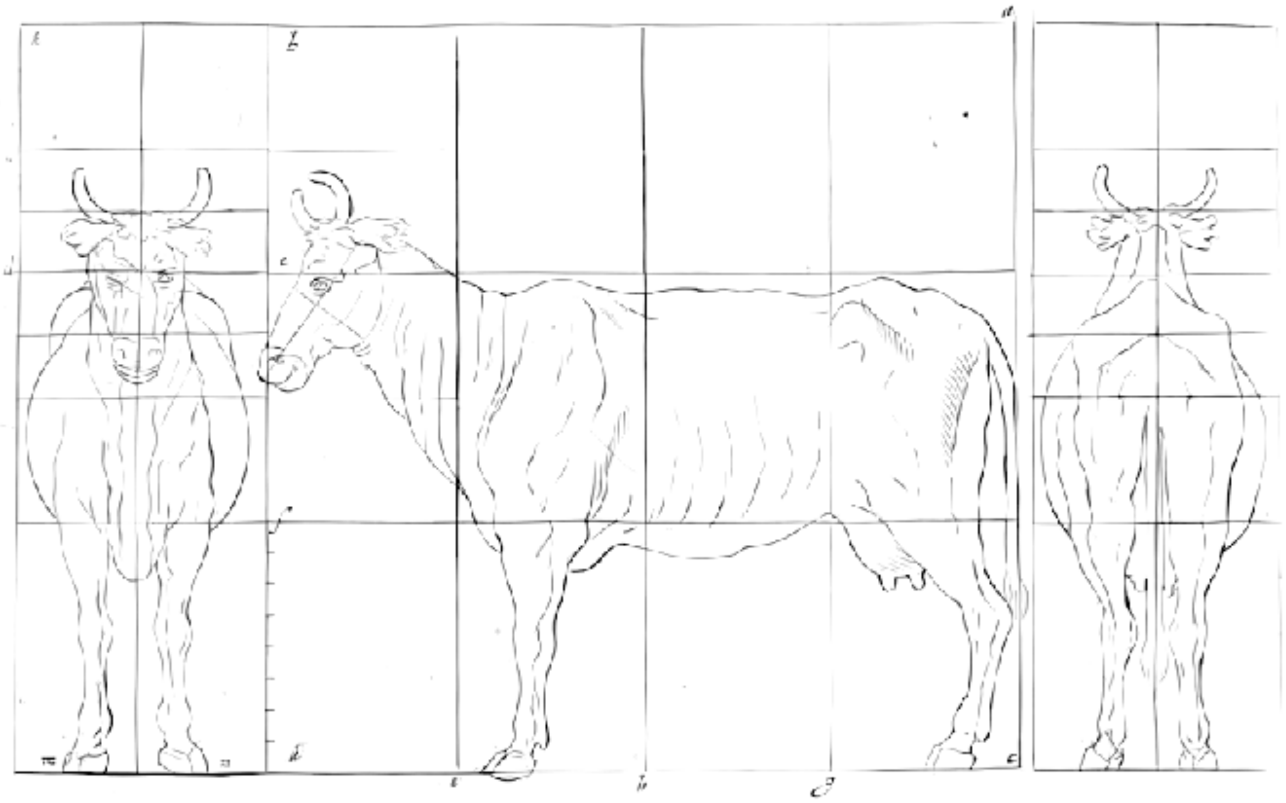
Next, divide the side from D to F, which I assume to represent a length of two feet, into eight parts, which correspond to quarters. I assign one of these lengths to the head, measuring from the muzzle to the space between the two horns, which is about one and a quarter feet in total width.

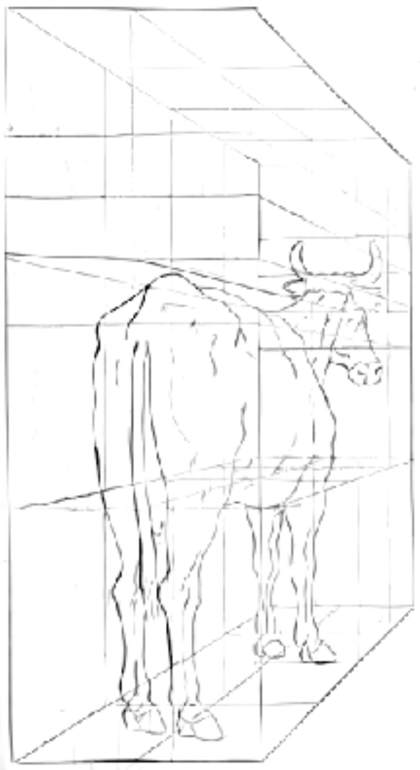
Then I define the first segment — namely the shoulders — between lines H and I; the belly section lies between G and H; and the hindquarters fall between C and G. The total length from the muzzle to the haunches is five feet. The belly is two feet wide, and the height of the legs and feet is also two feet.

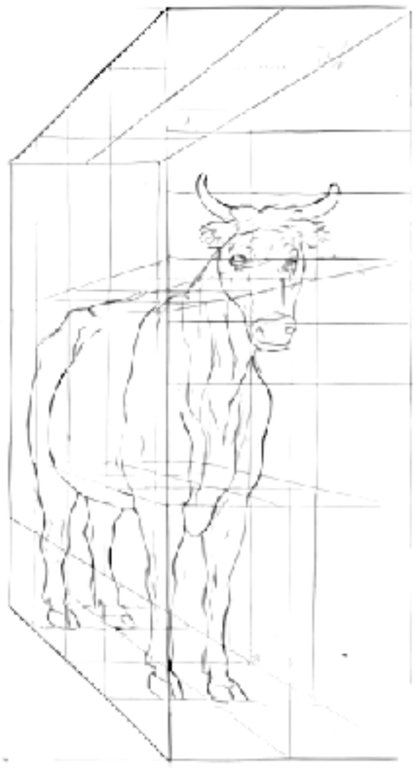
The rest can be understood by referring to the example above.

To draw the cow from the rear, use the same method I described for the horse. Use the same side of the square, dividing it into three parts as seen from A to I, M to N, etc. The line E of the square, marked C, Z, Y, M, is the same as shown in the square above, following the lettered labels.

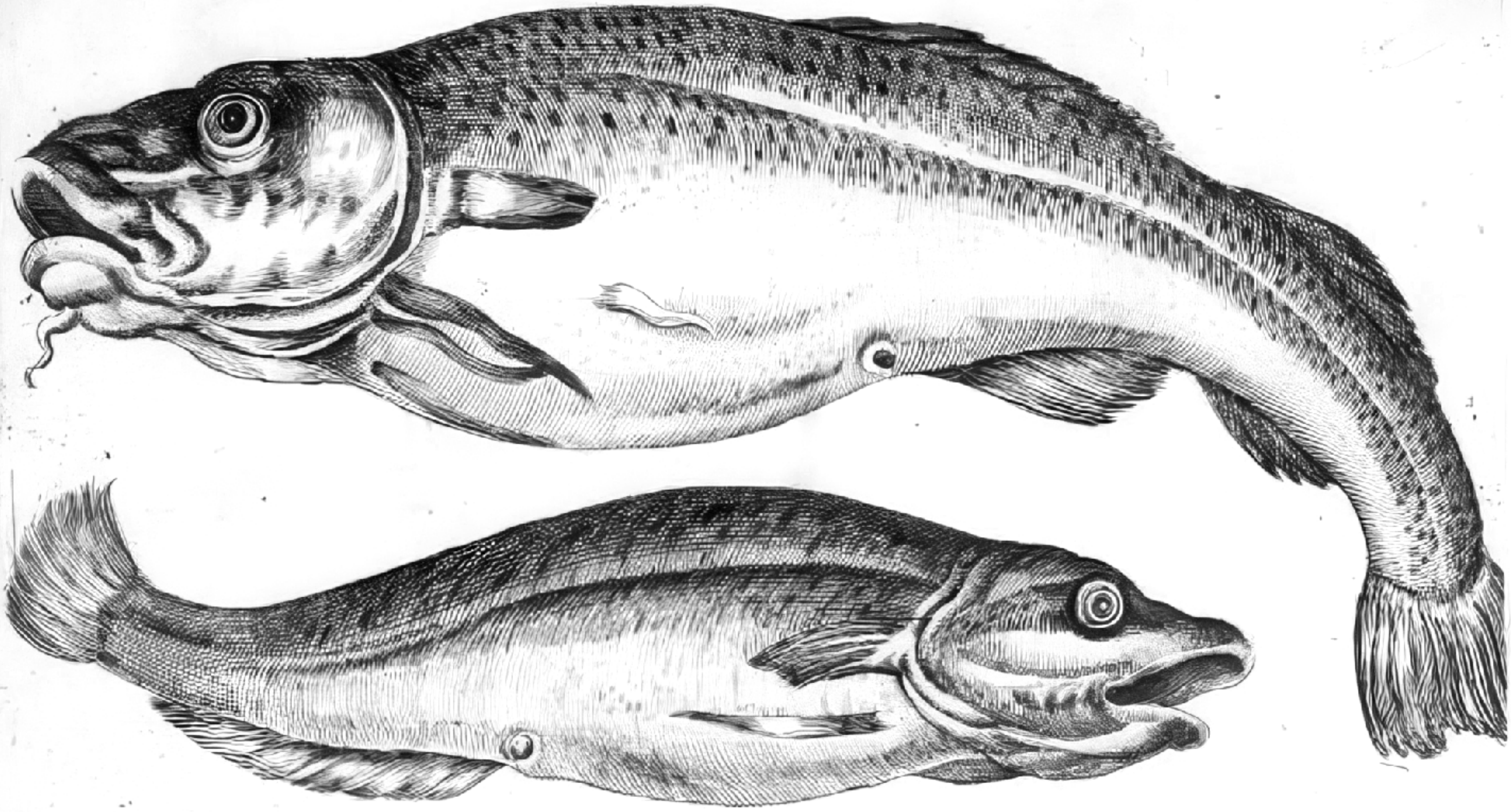
Here as well, two cows are shown in foreshortening, drawn using the same method as the horse rendered in perspective.

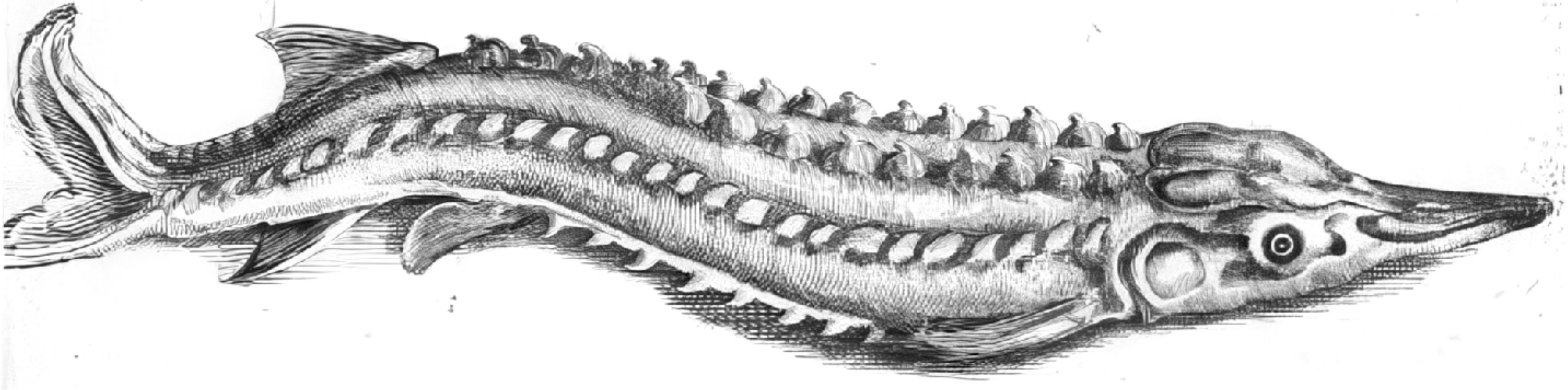

a
k
b
i
c
f
d
m
n
e
h
g
c

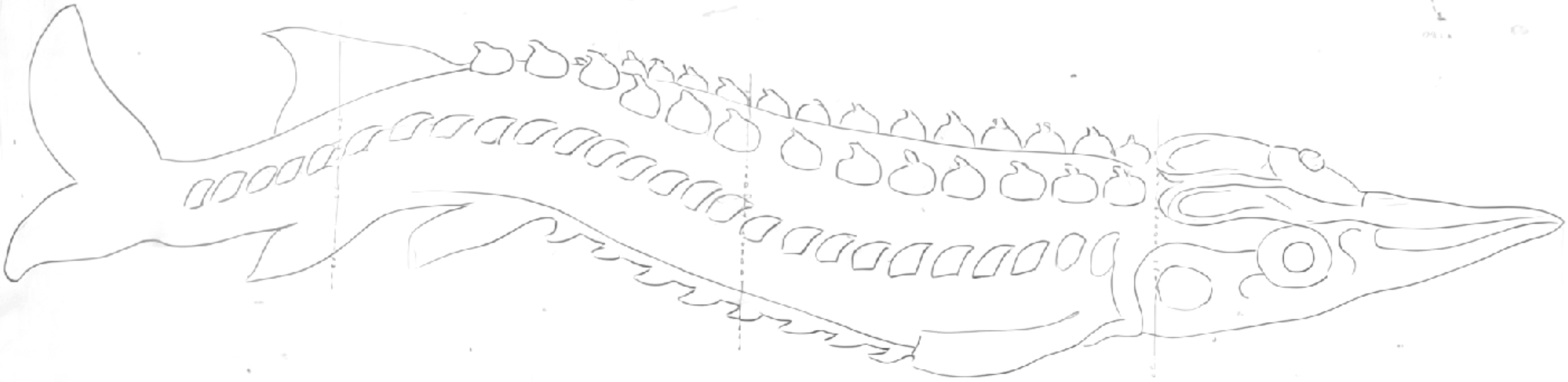


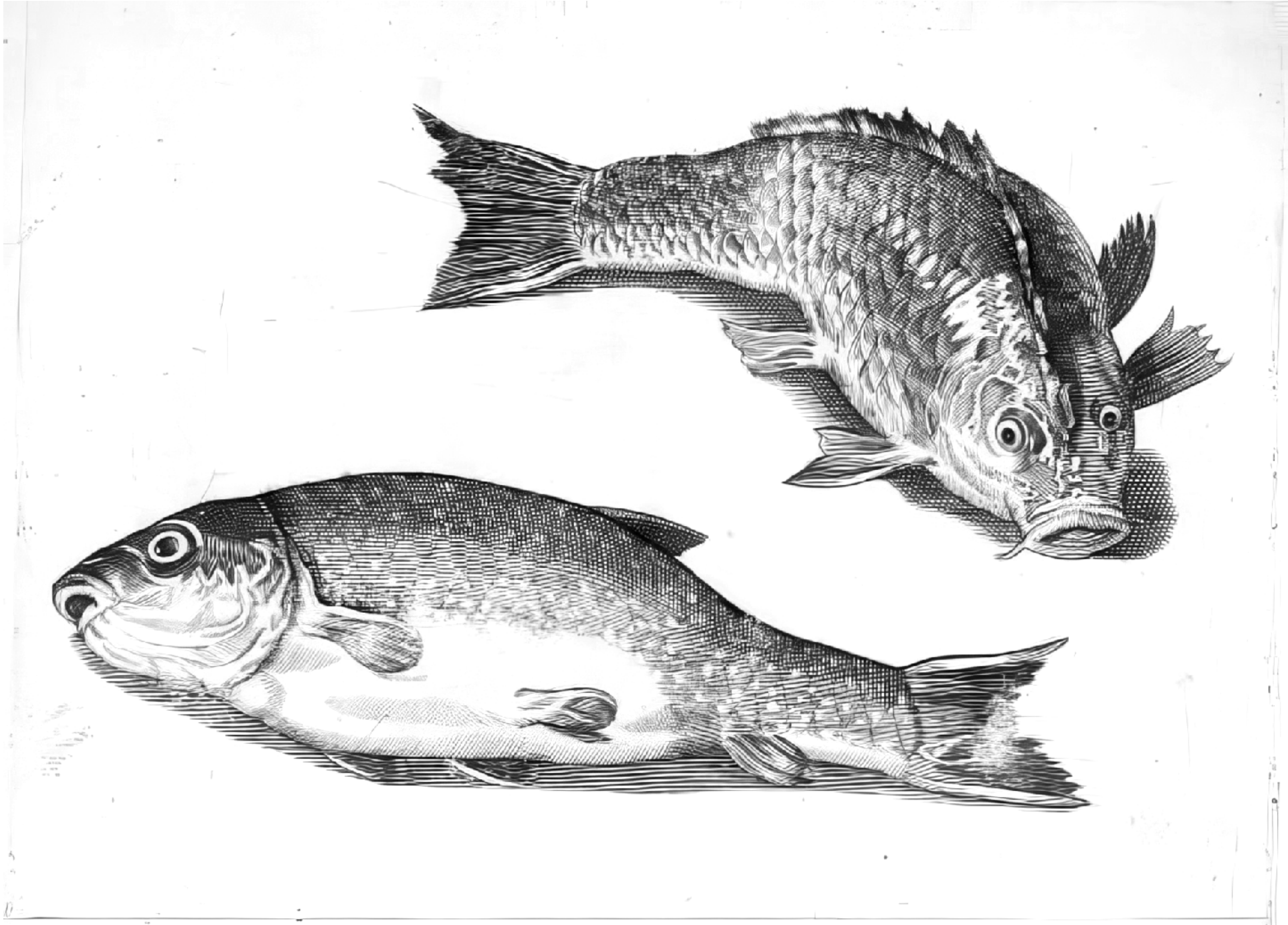


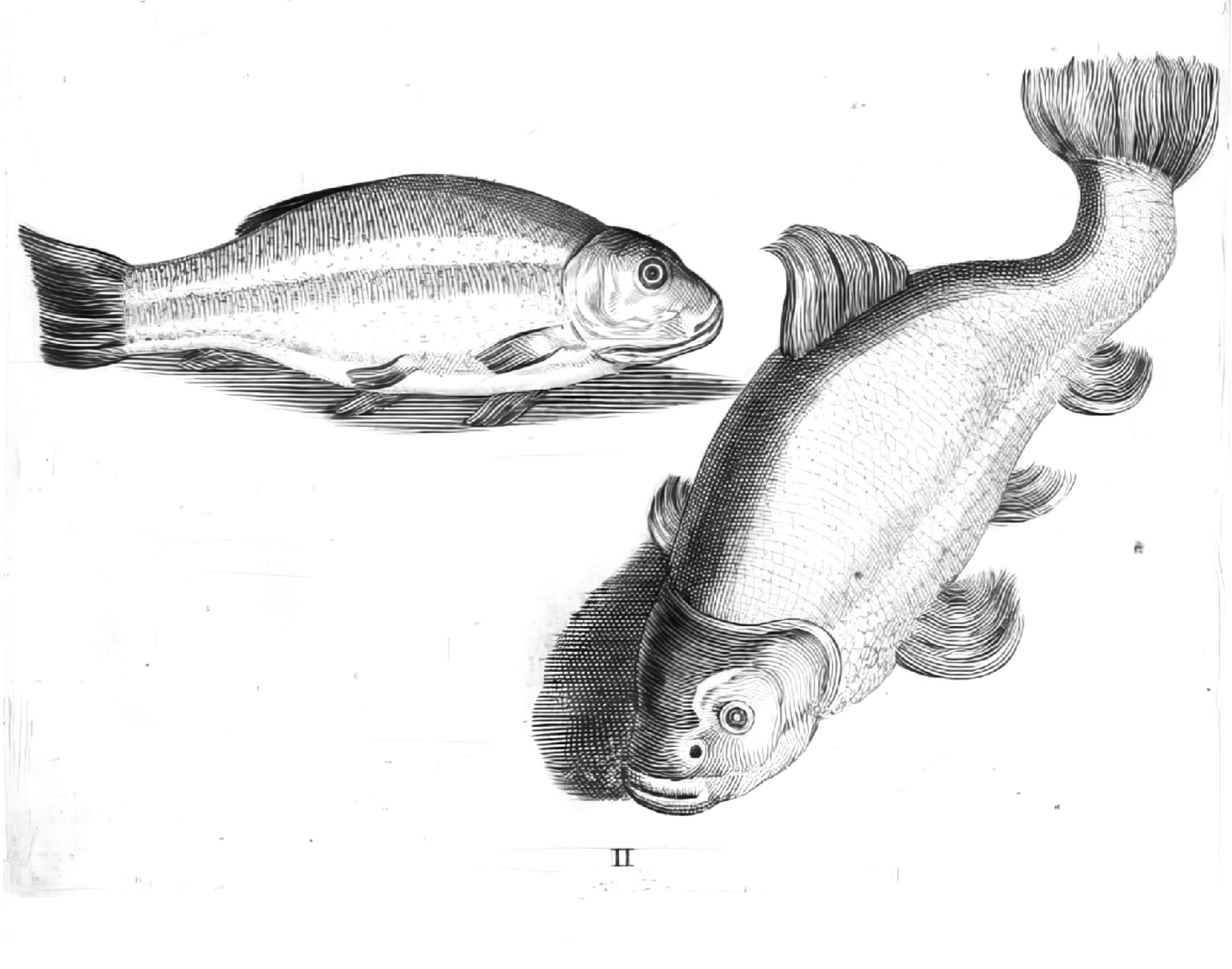
XII



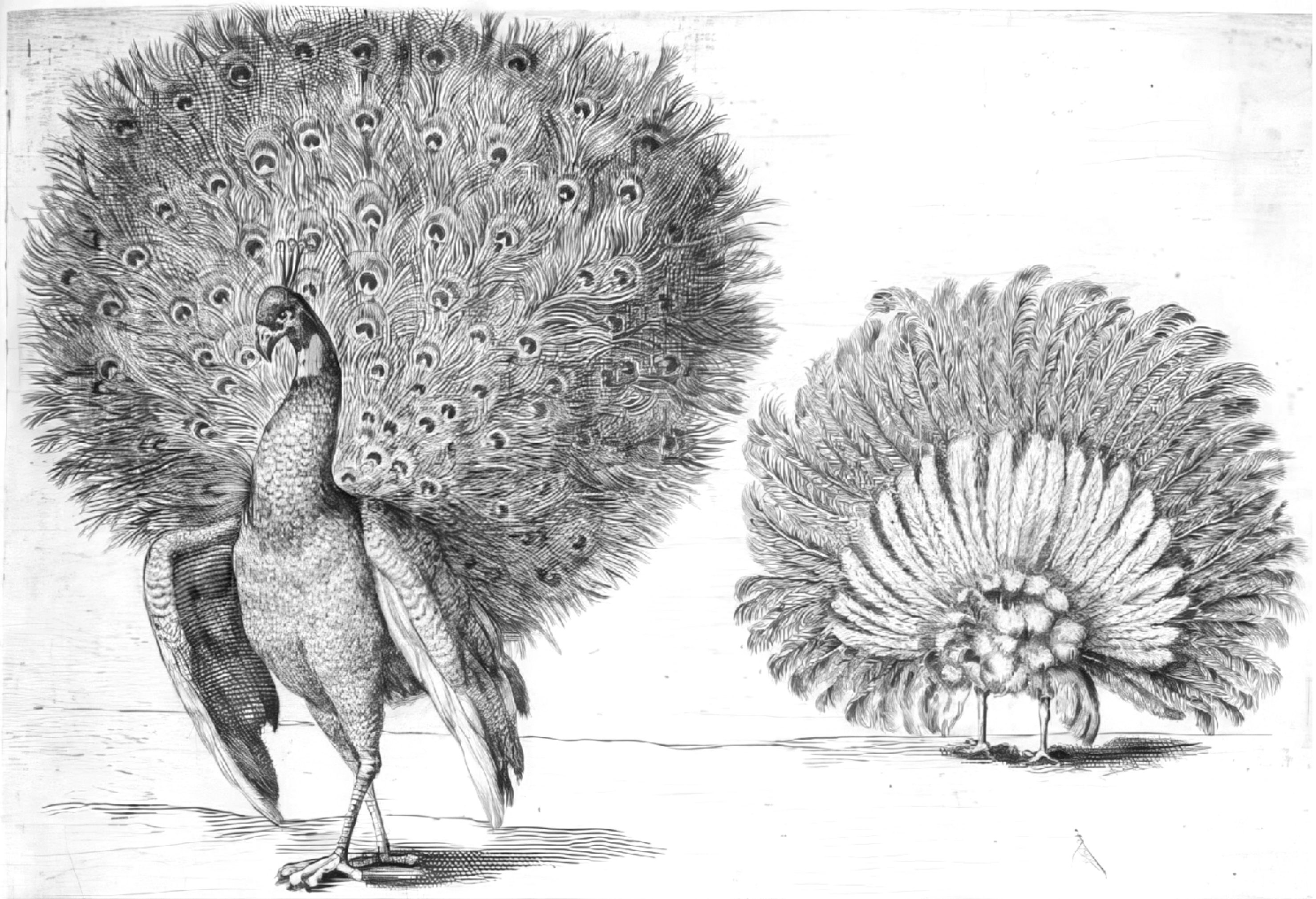


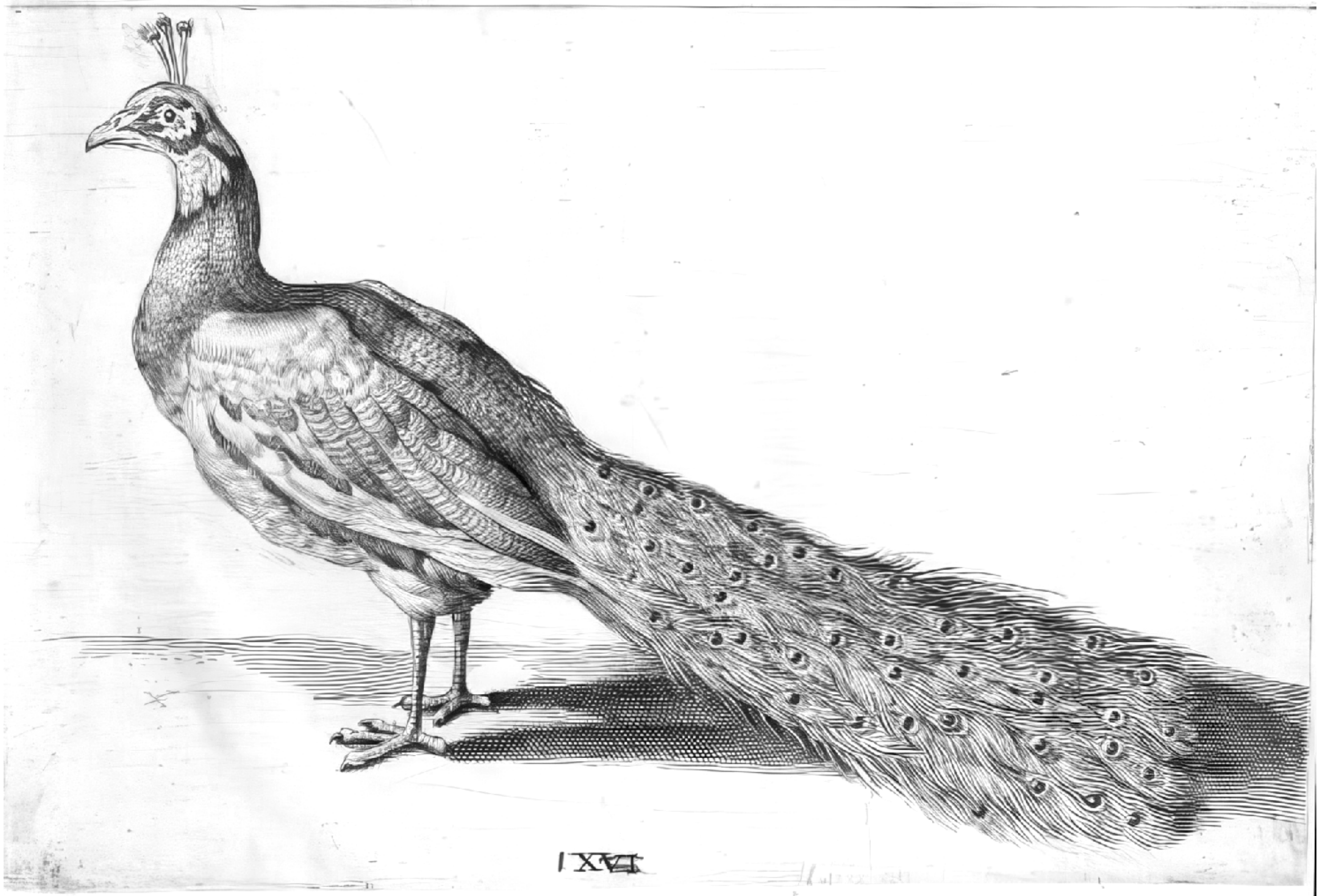


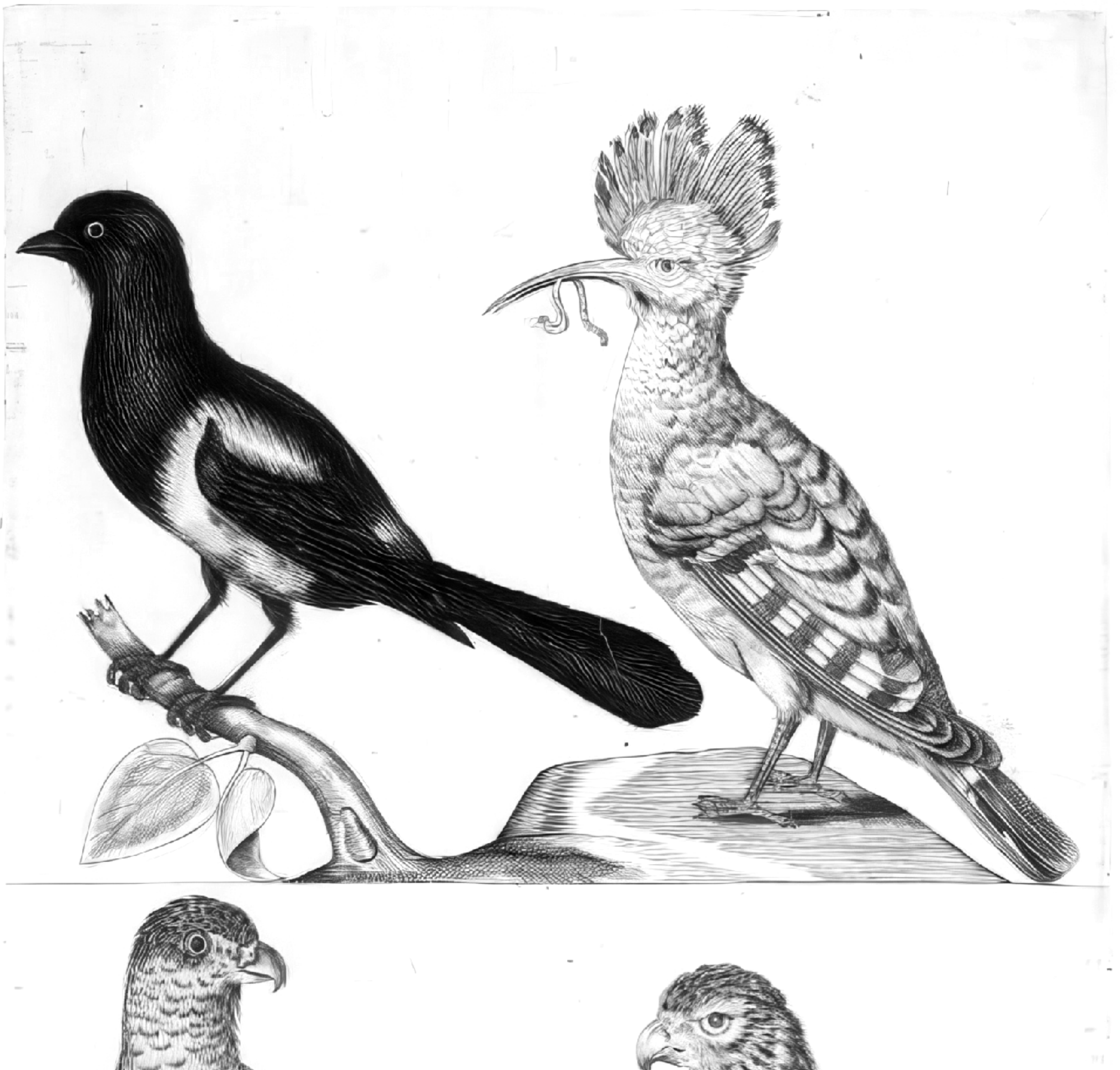




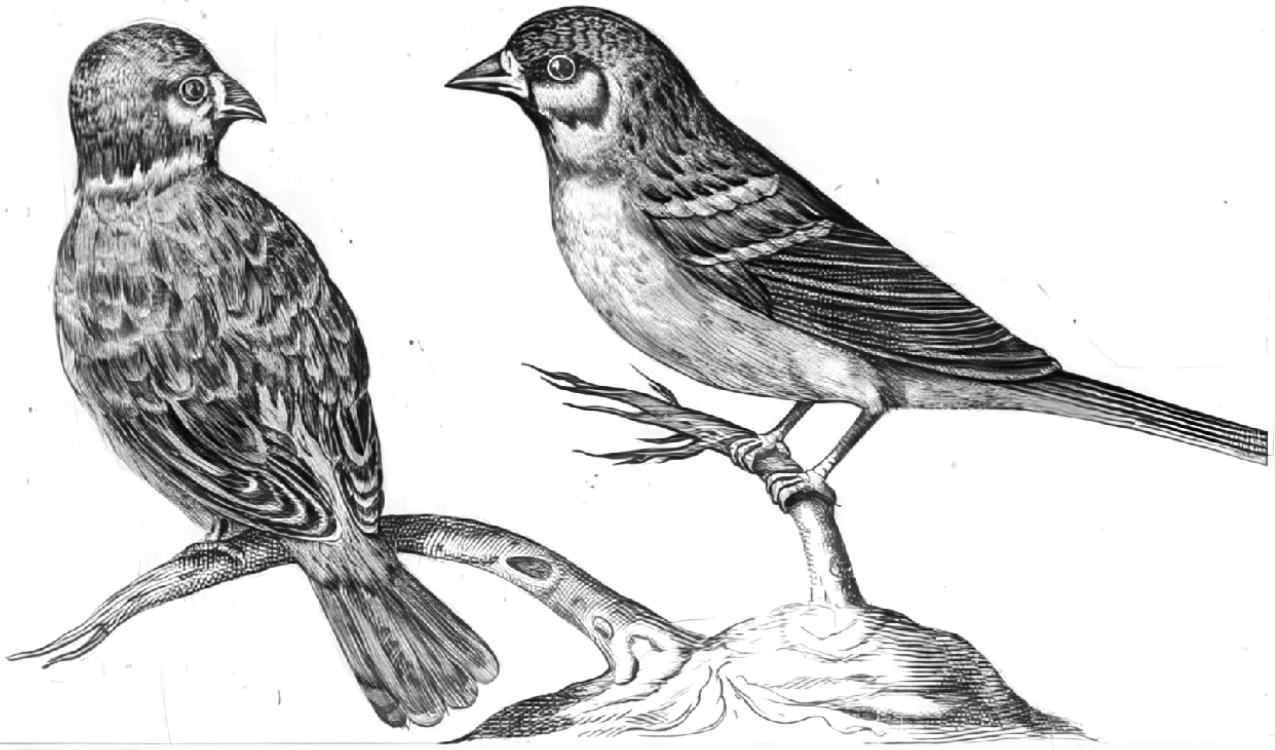
II

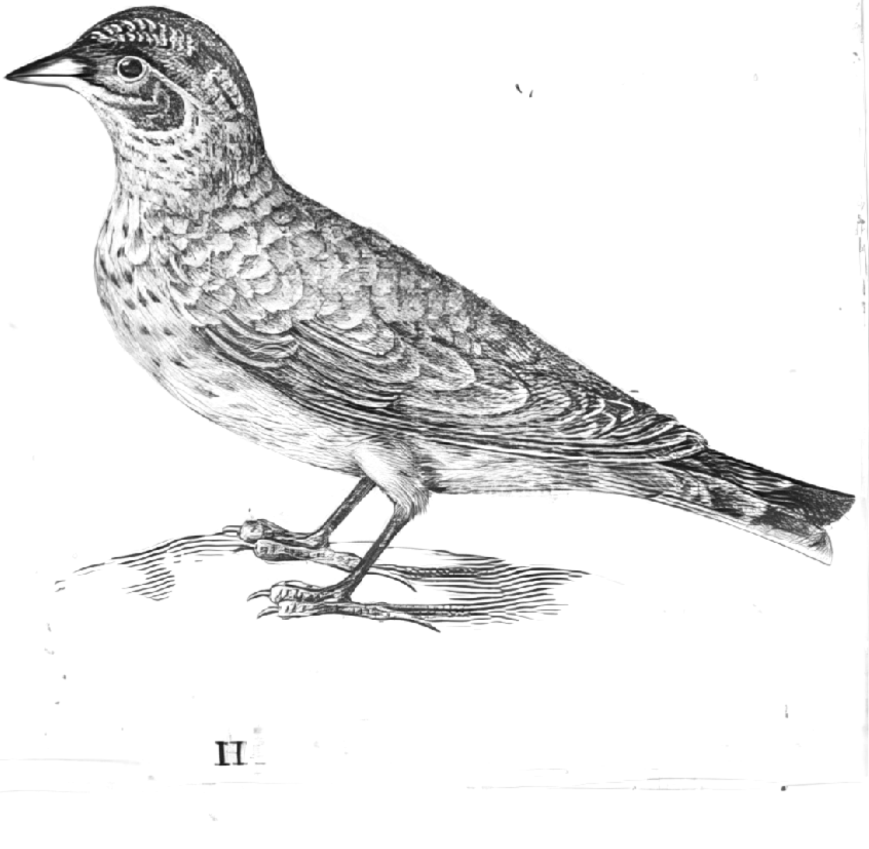




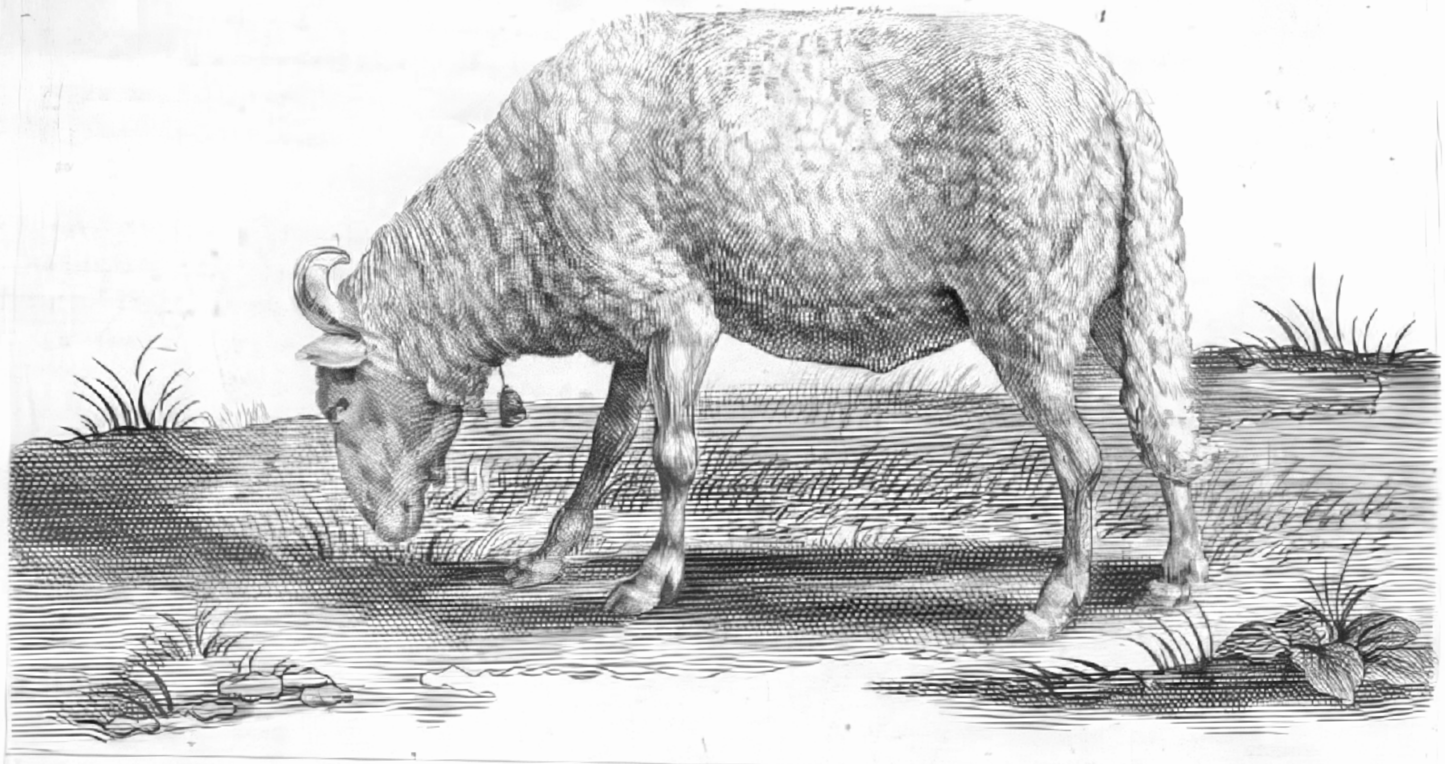


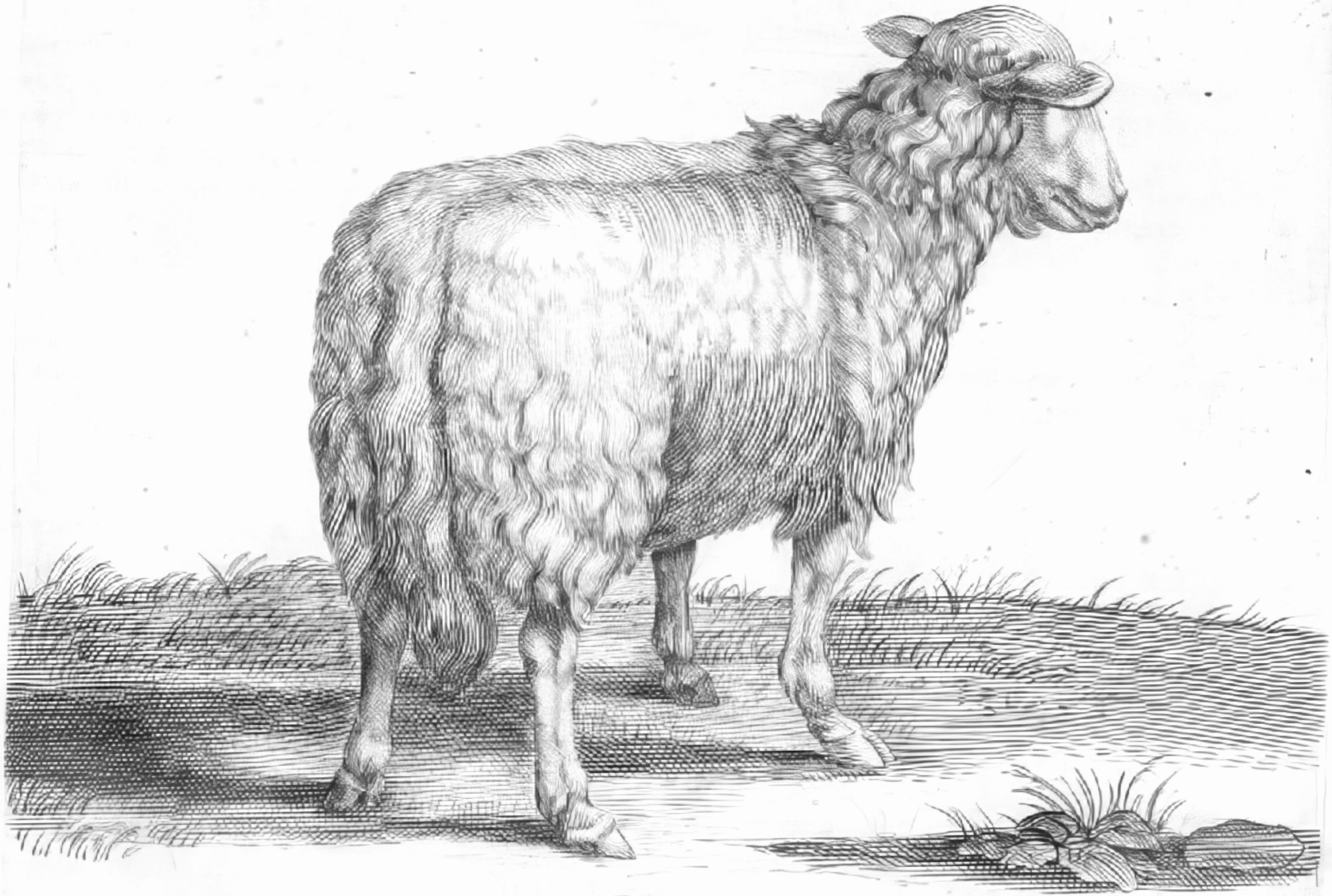
VII.



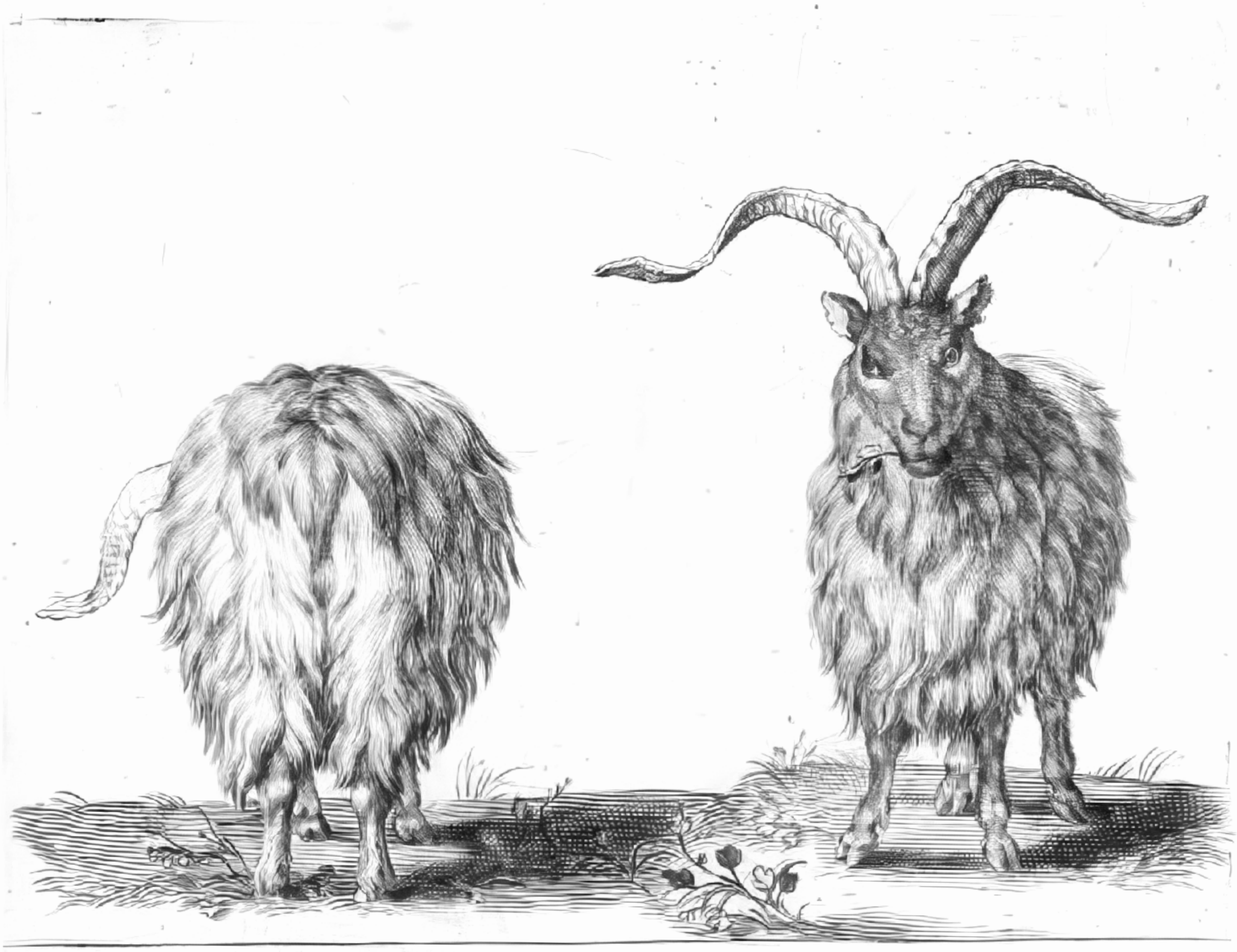


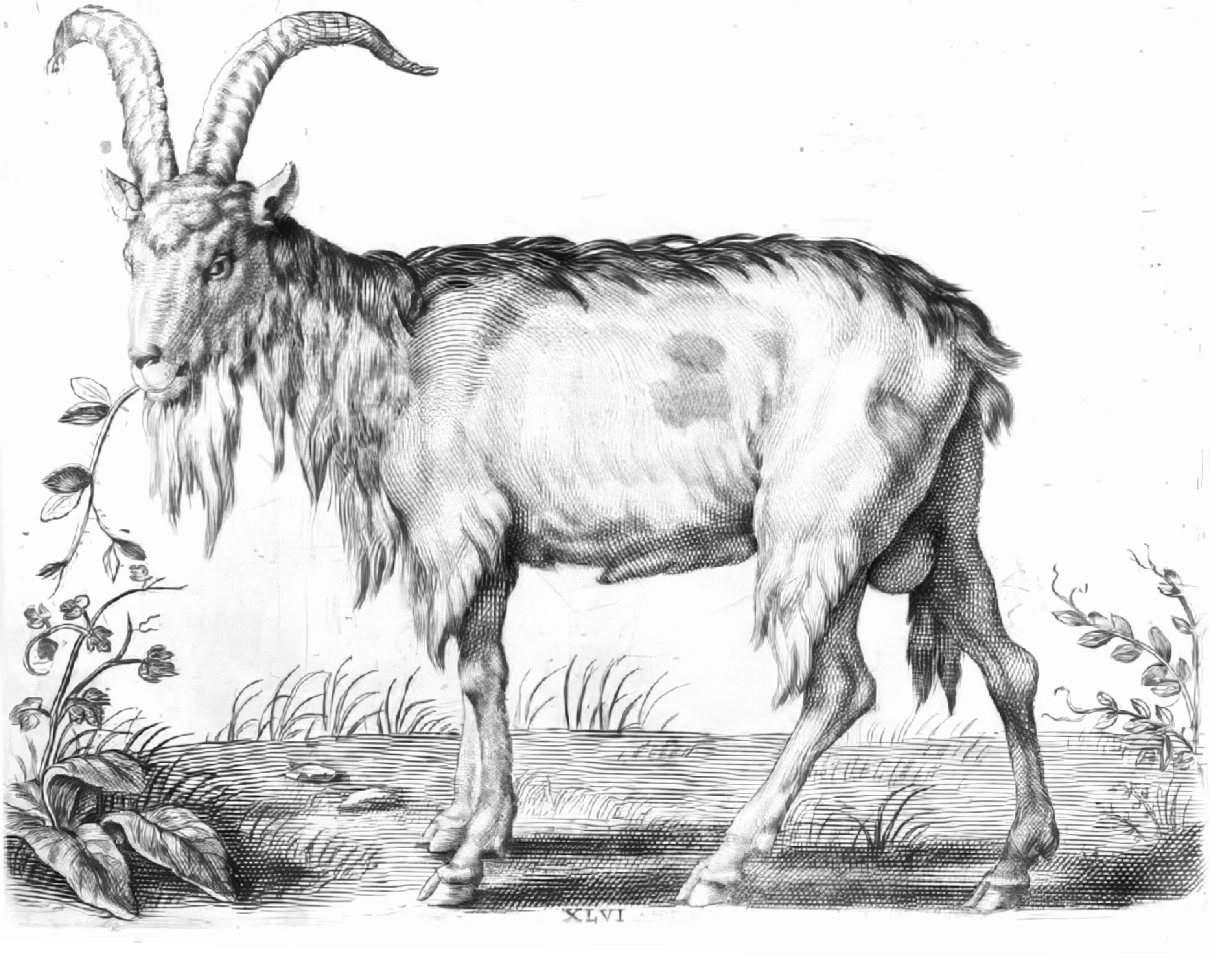
II



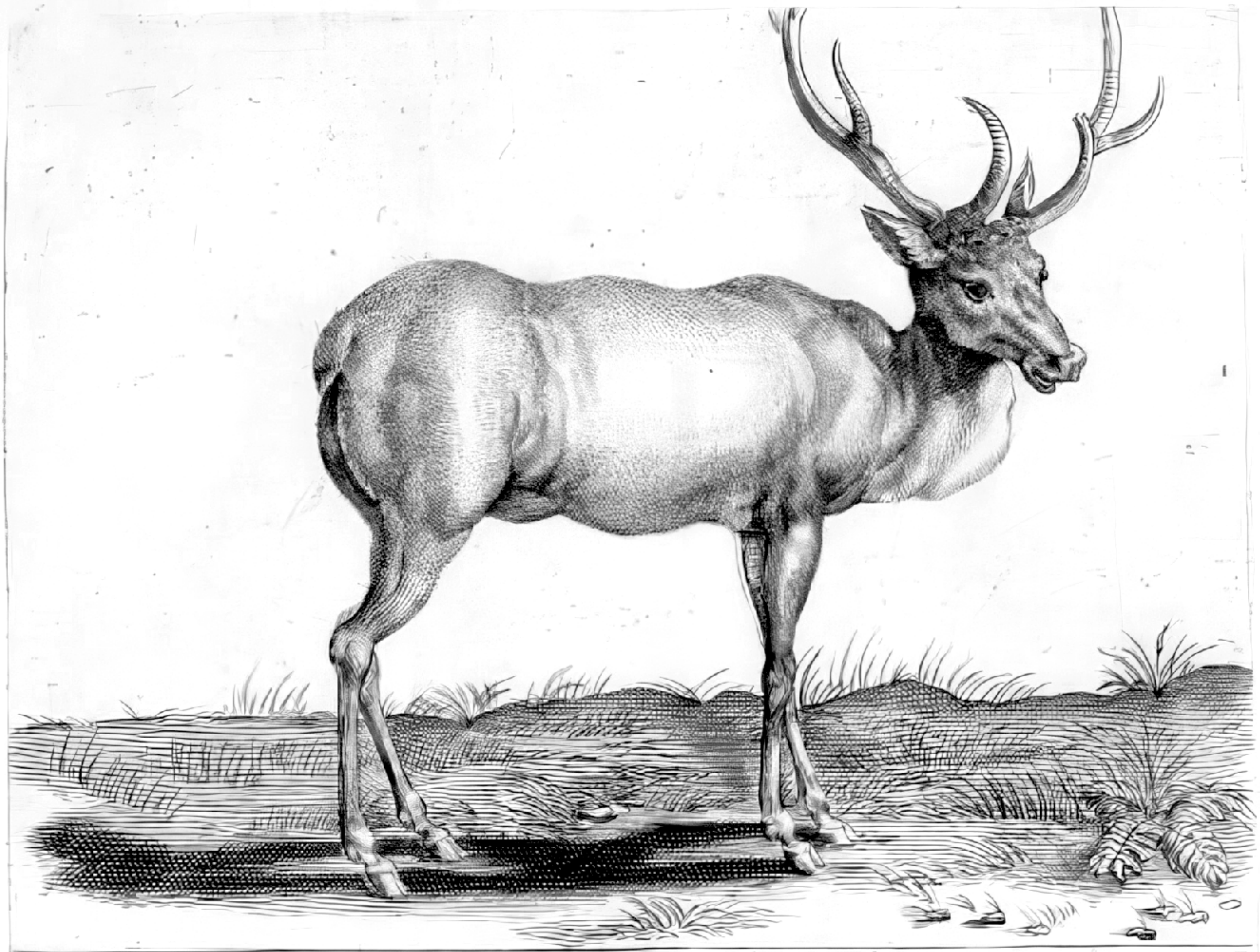


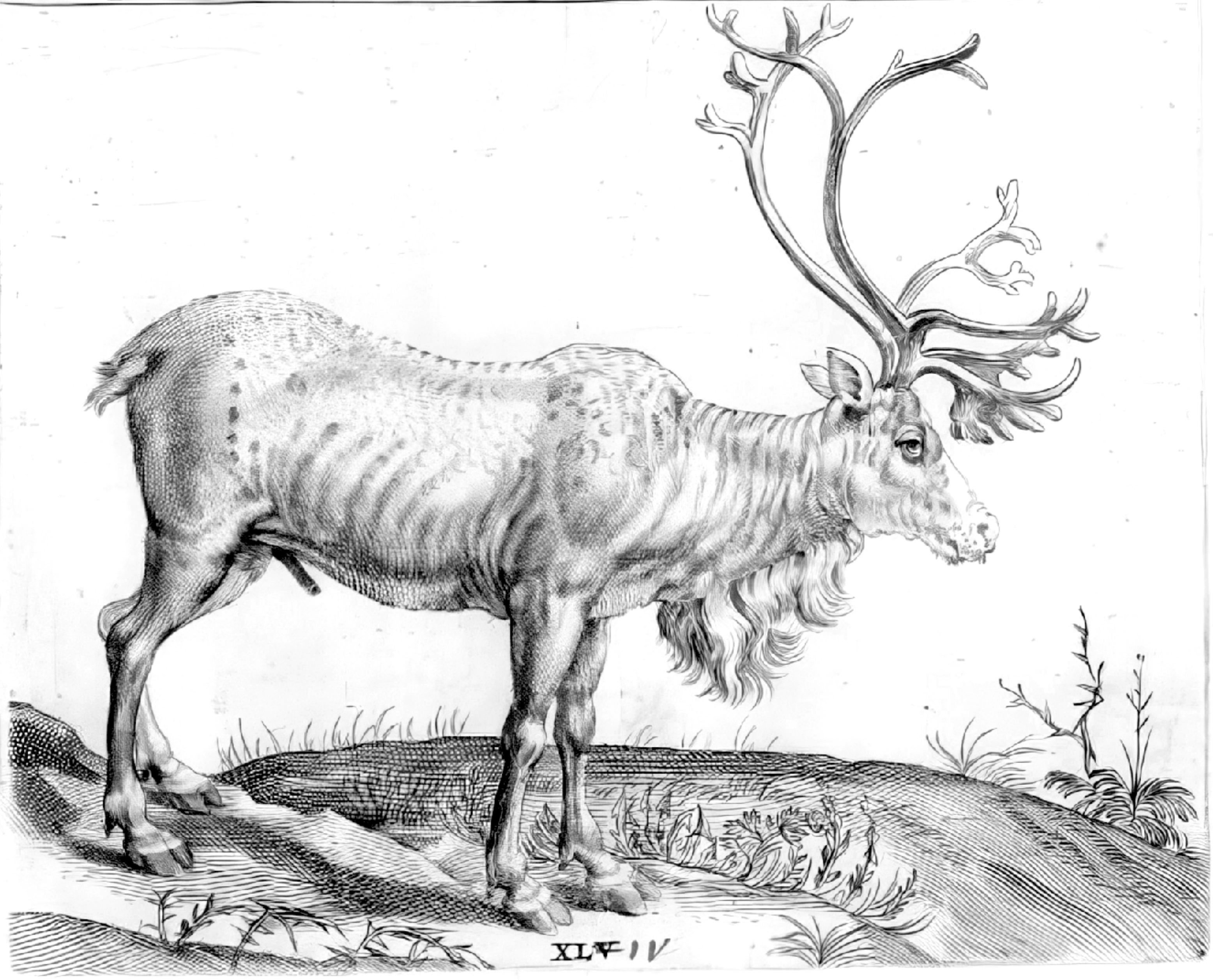
LXVII



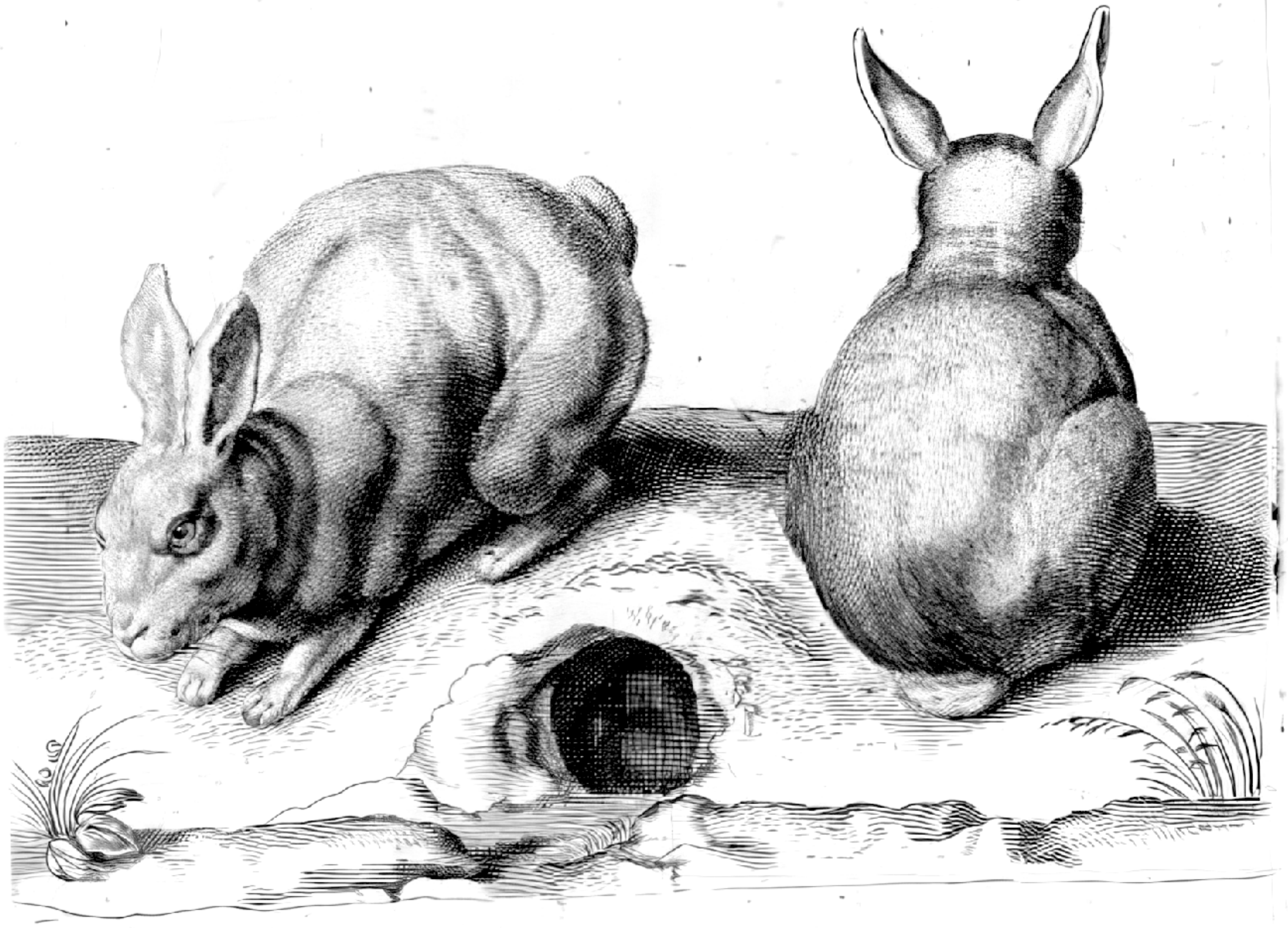


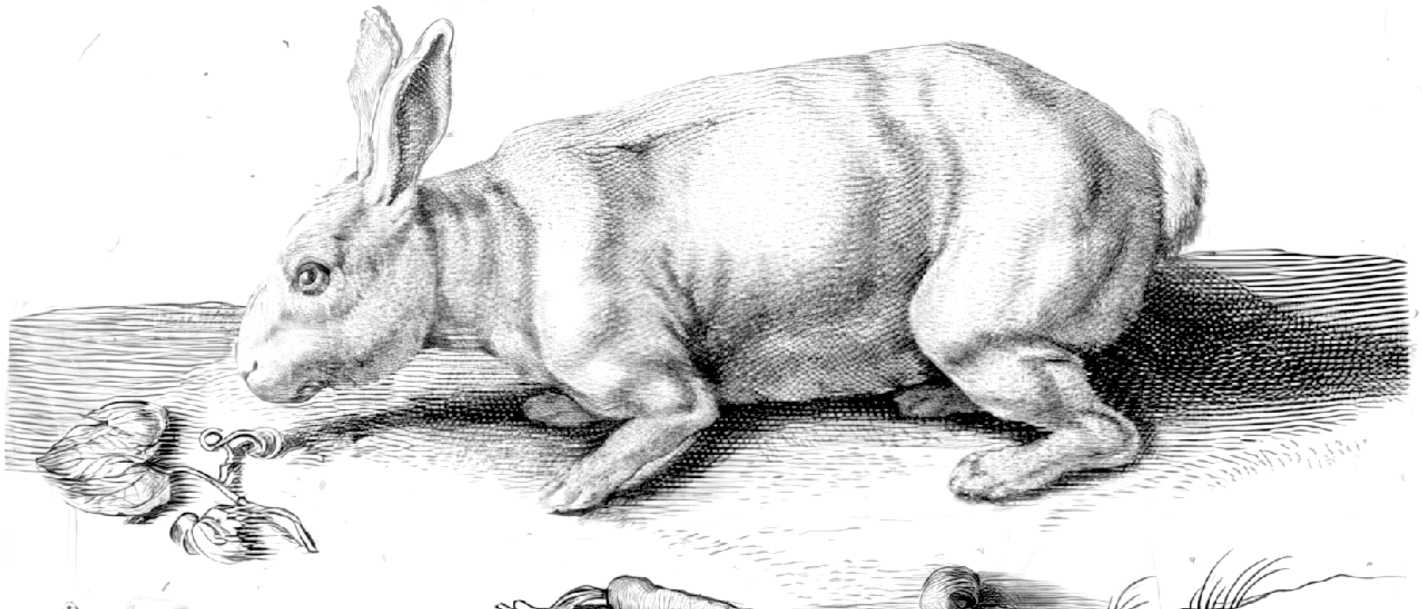
XLVI



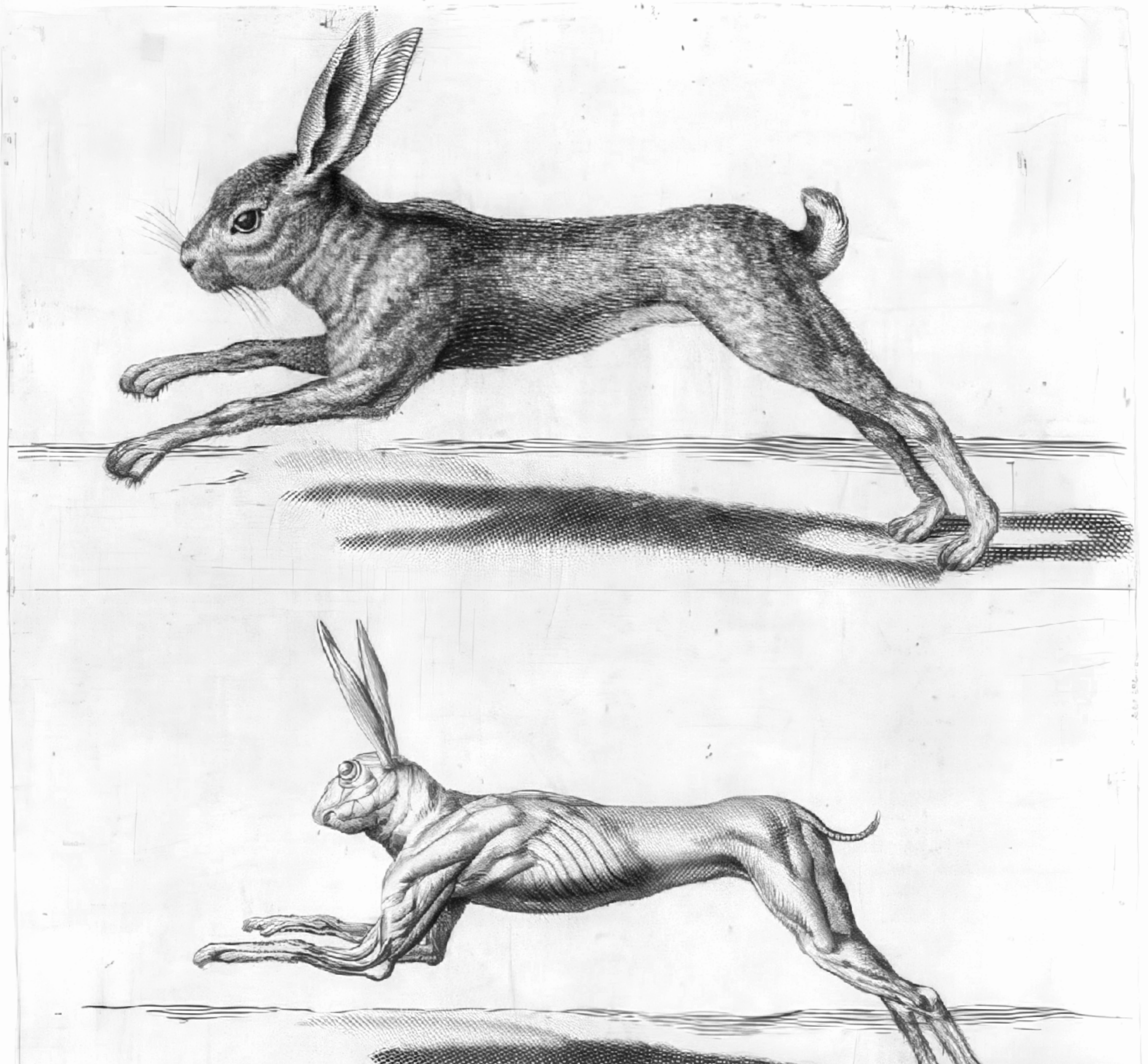


XLV IV

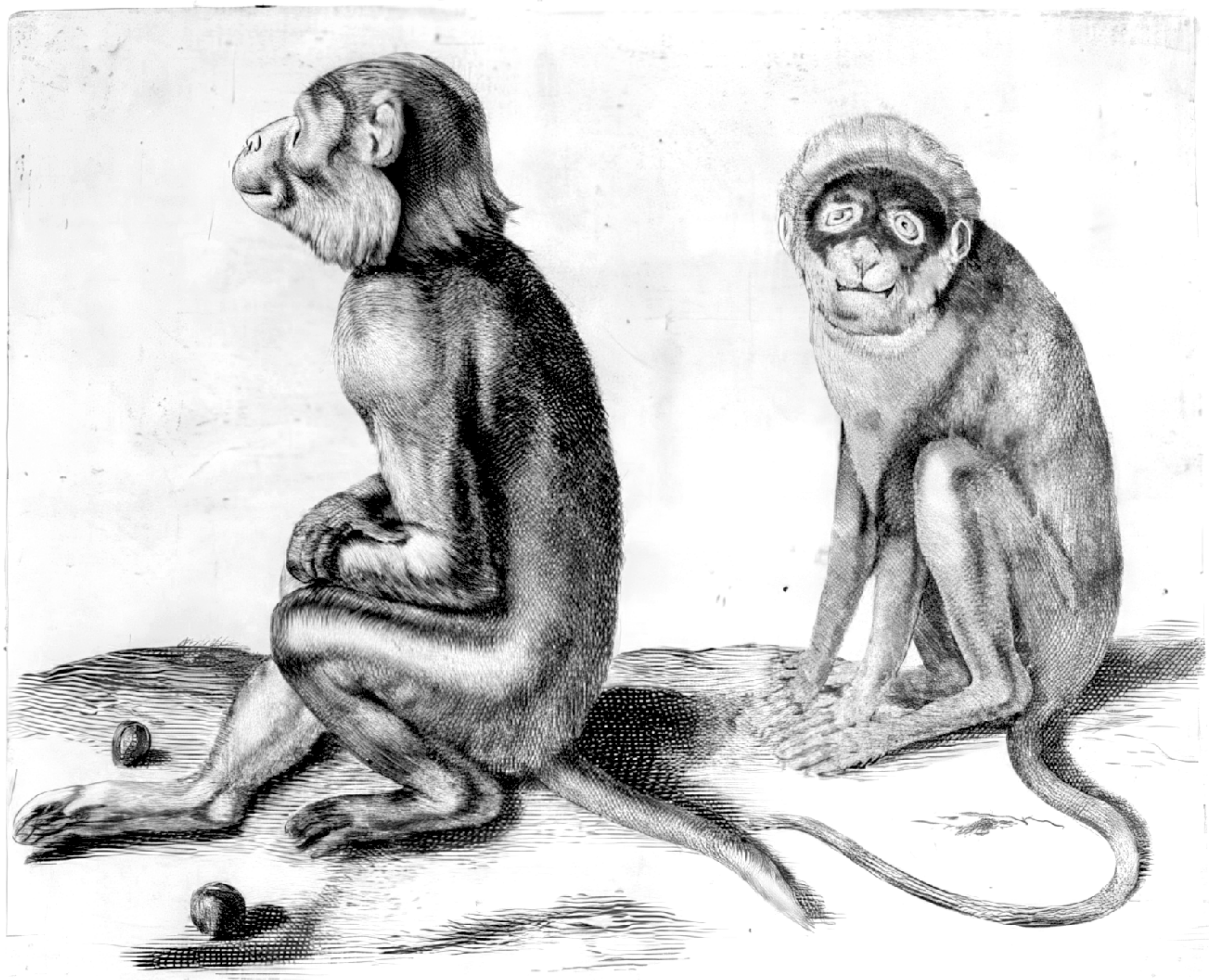


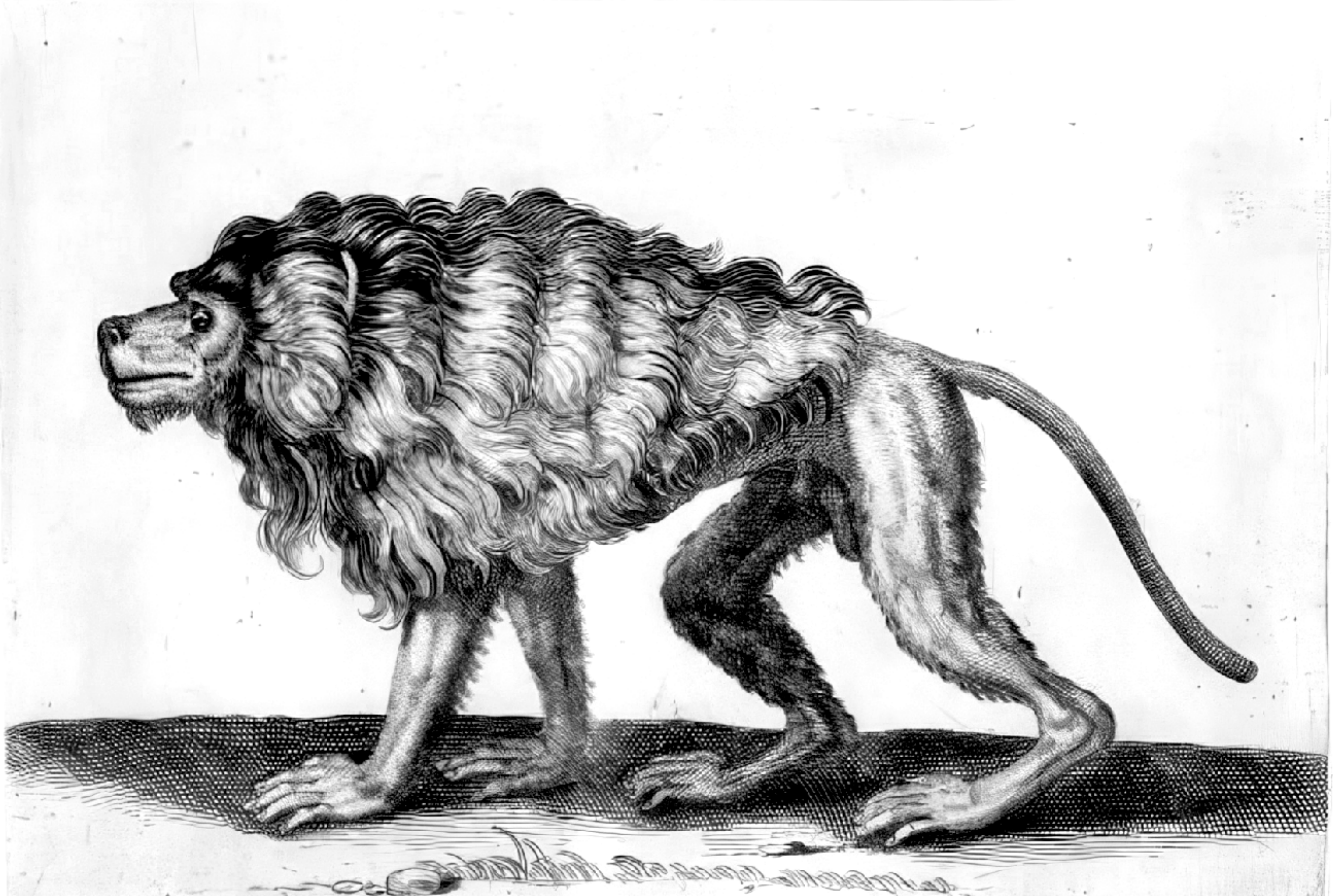


XLII

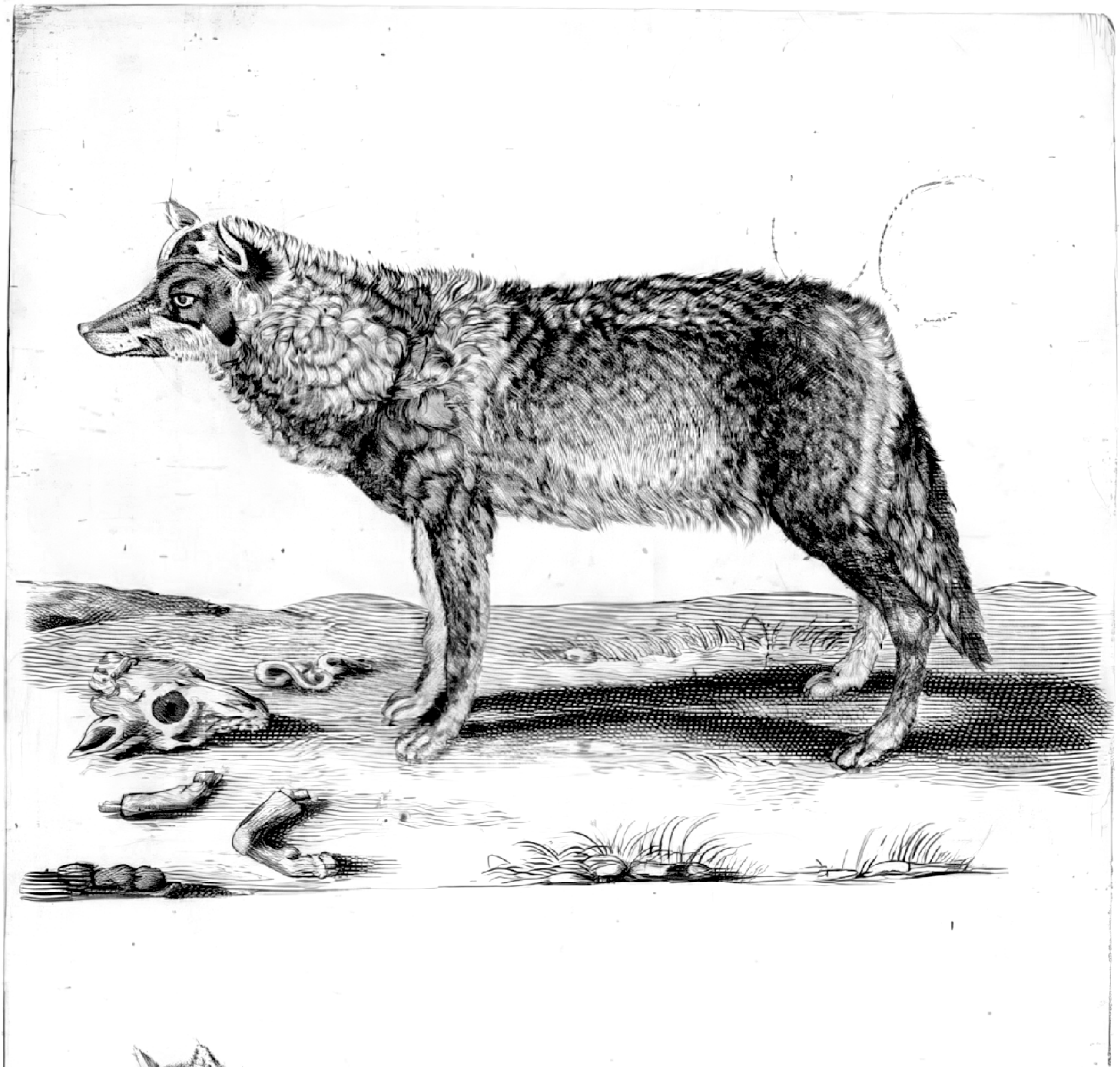


LXI.

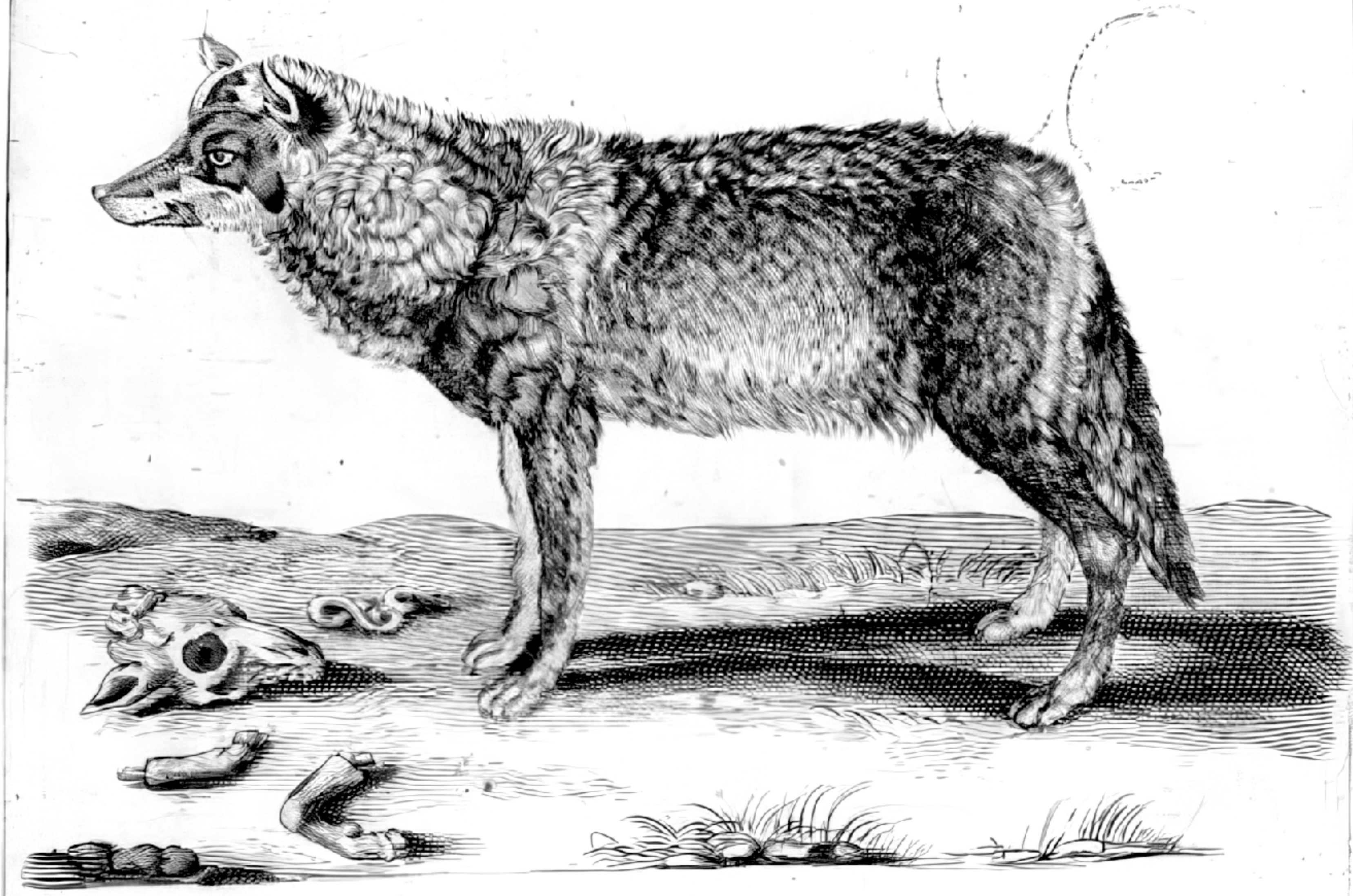


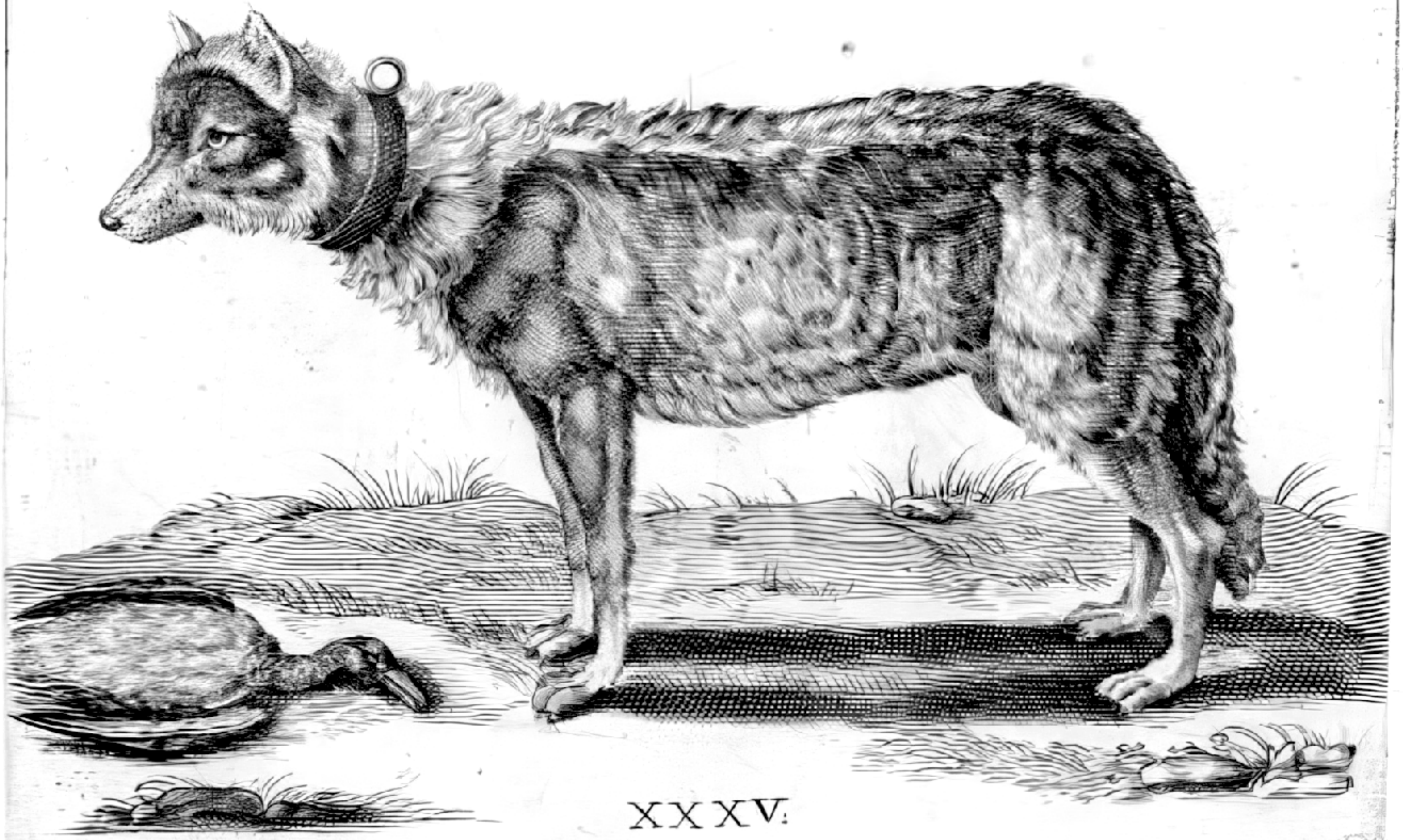


XXXX

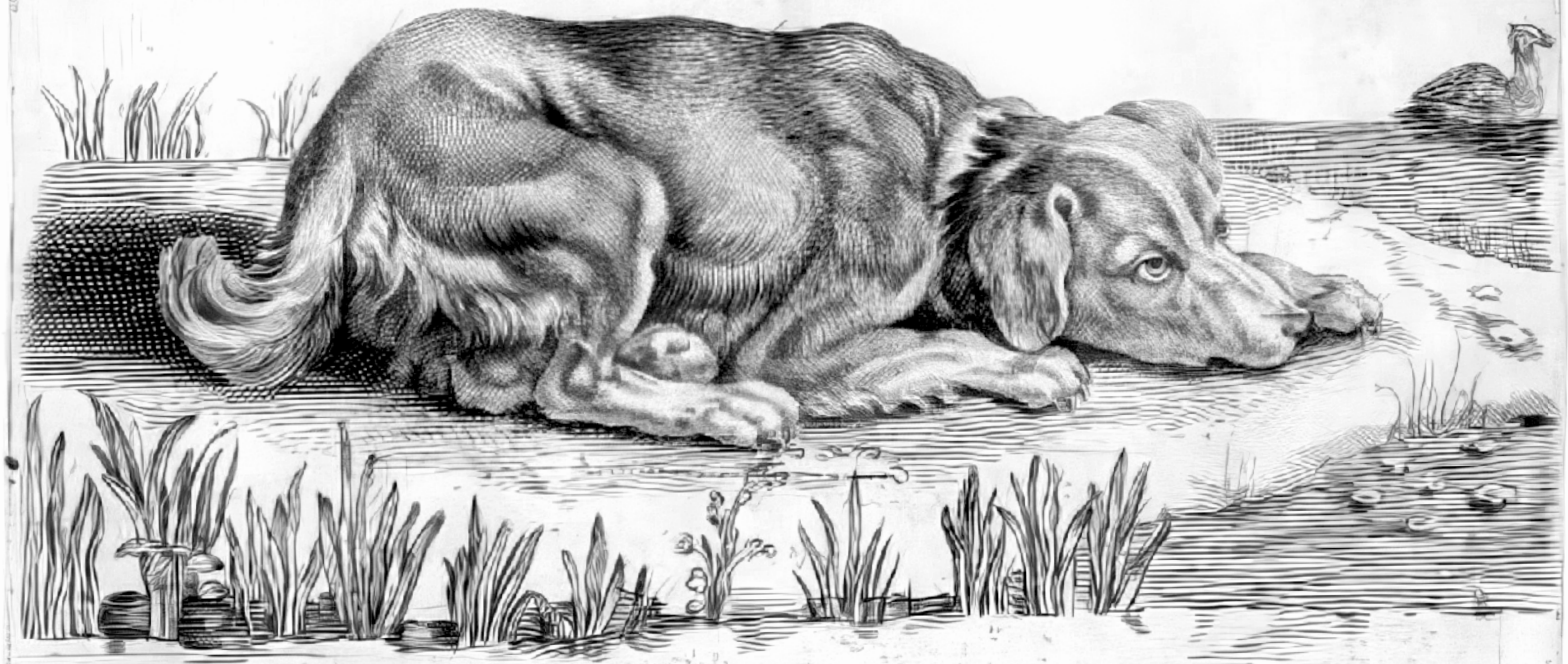


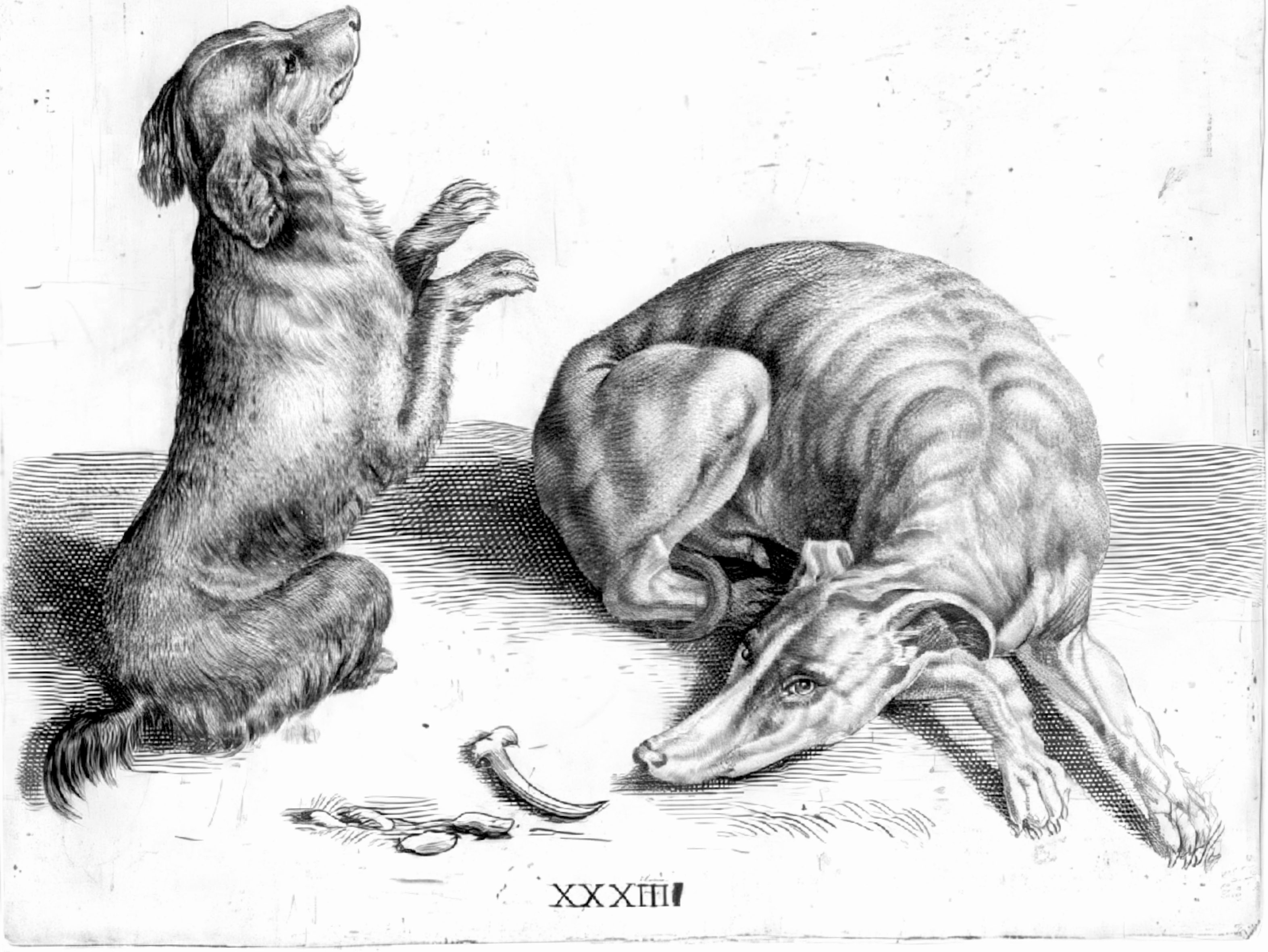
XXXV.



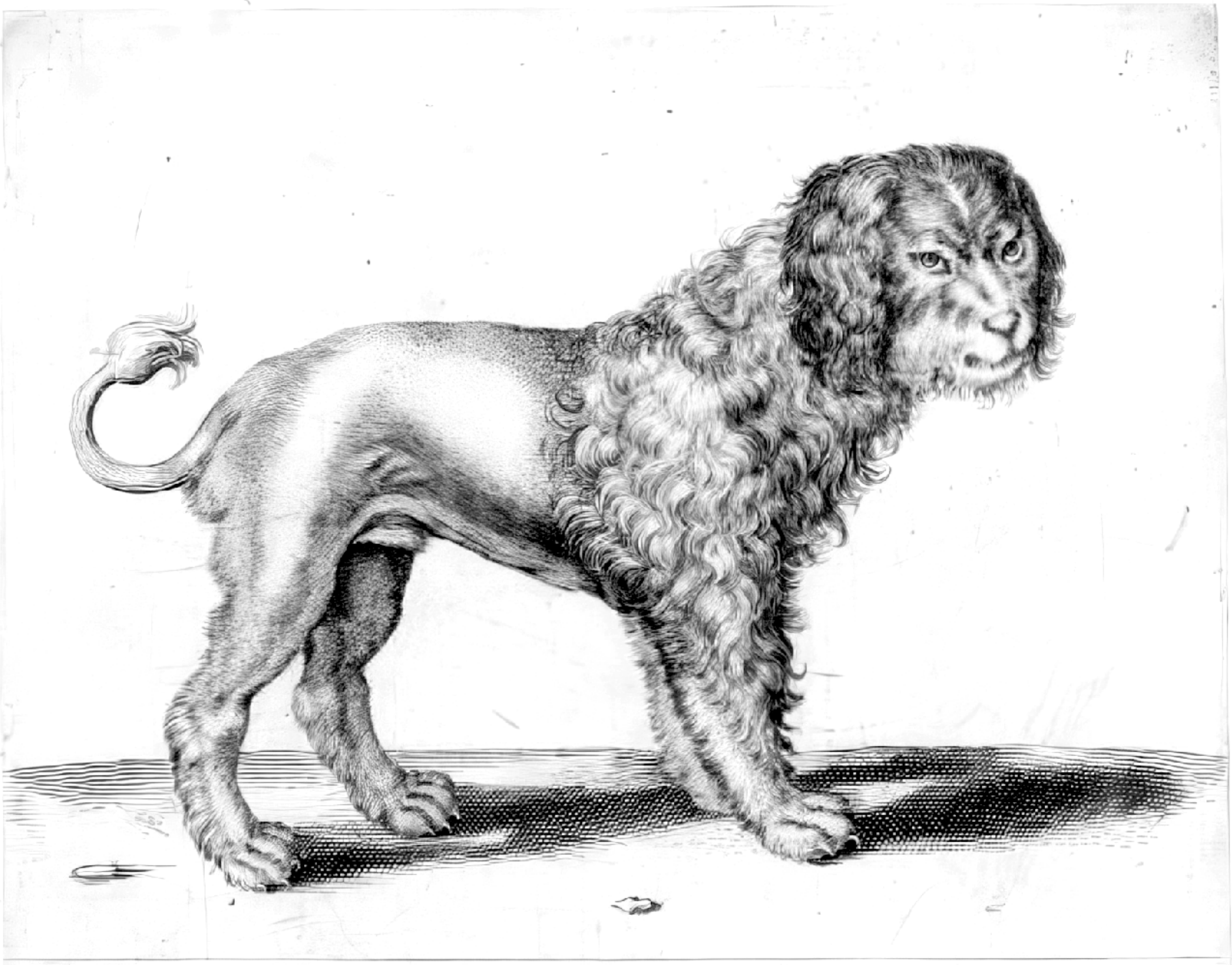


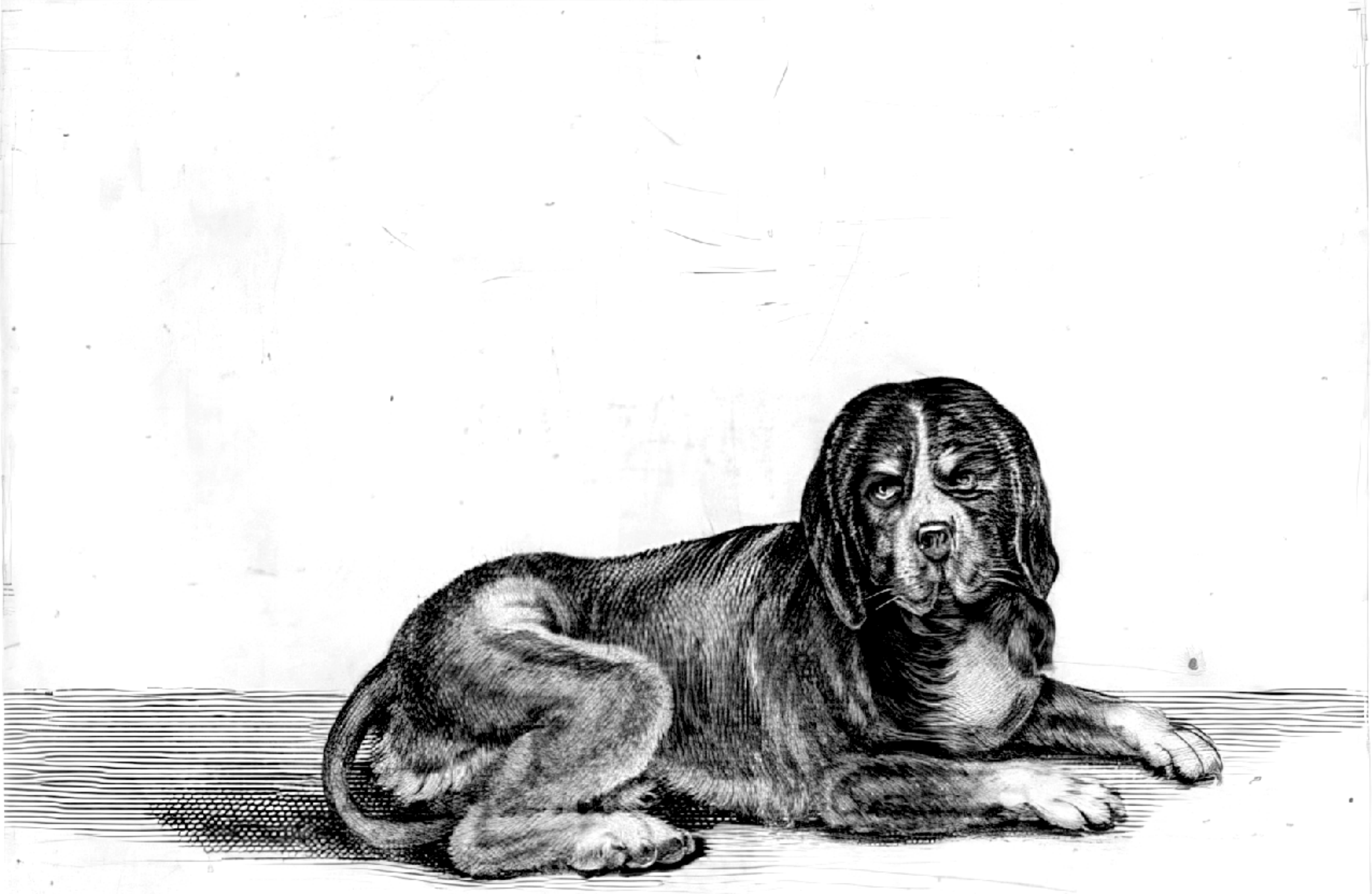
XXXV.





XXXIIII

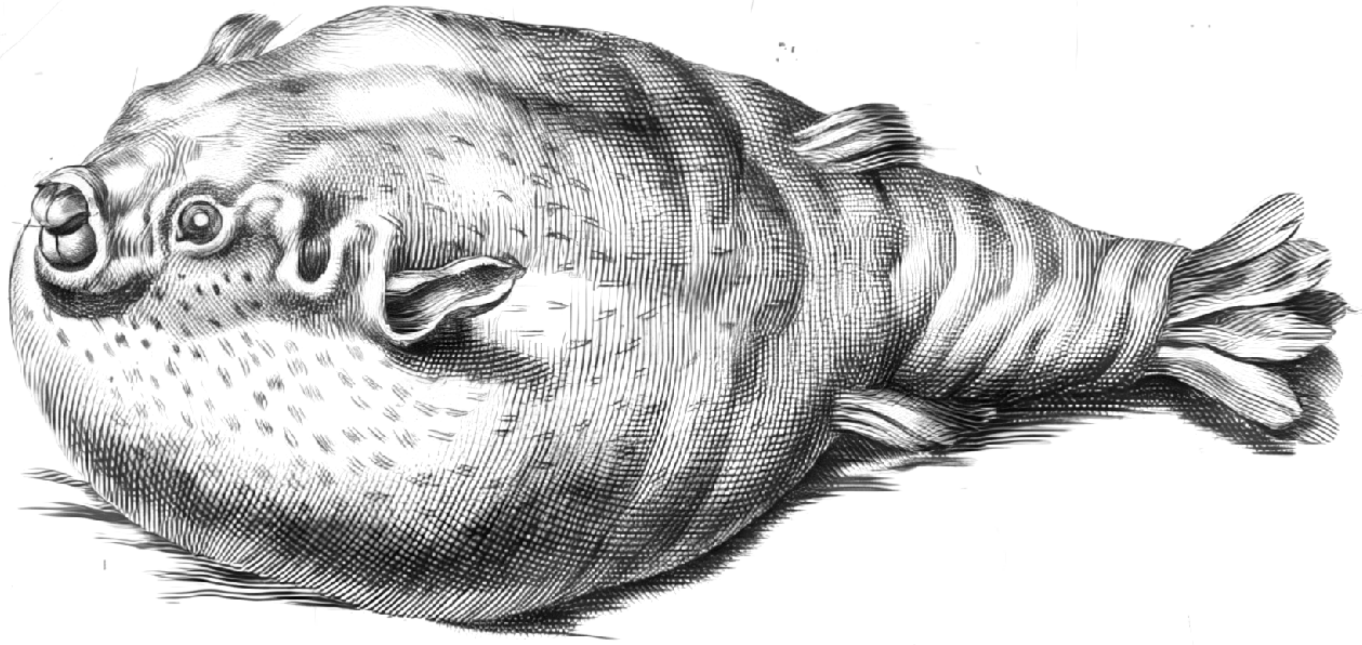


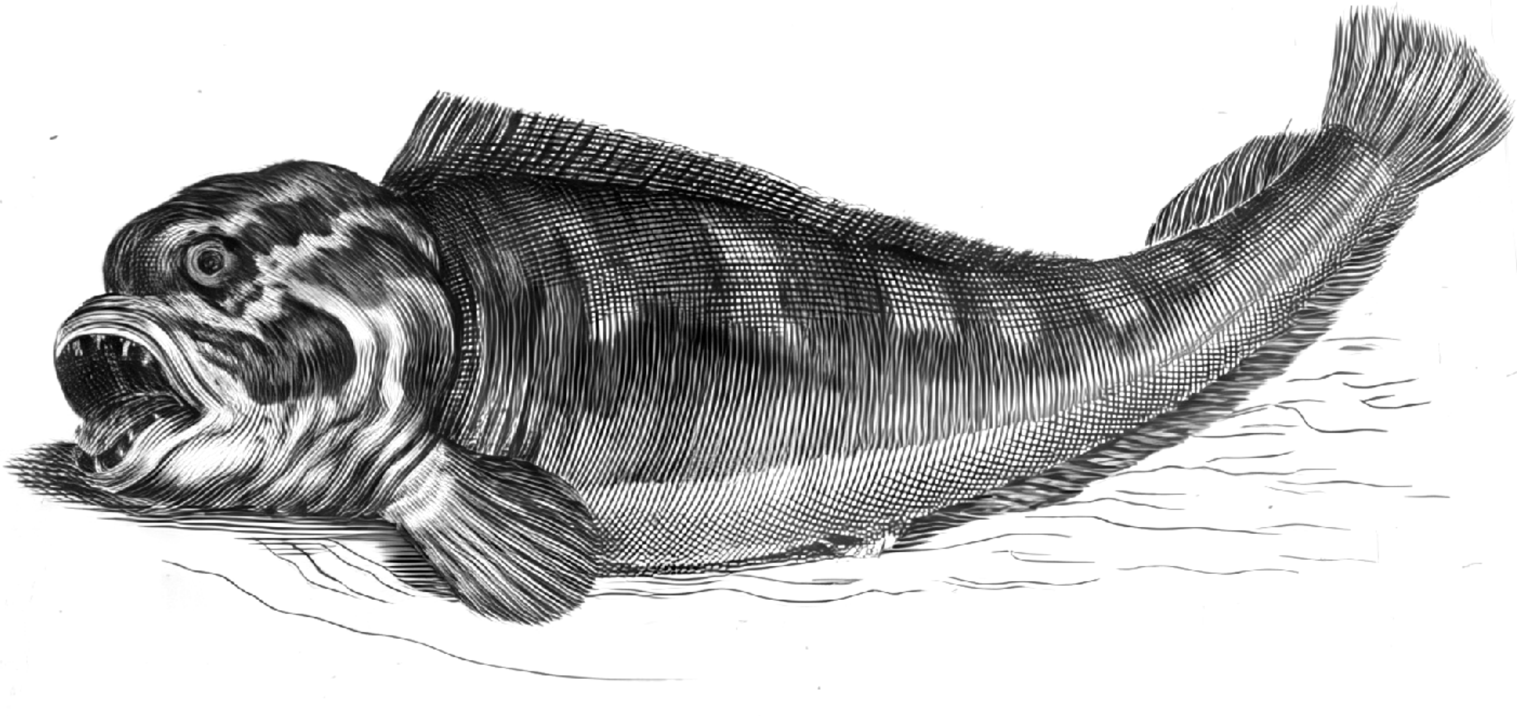


R. Sauery delin:

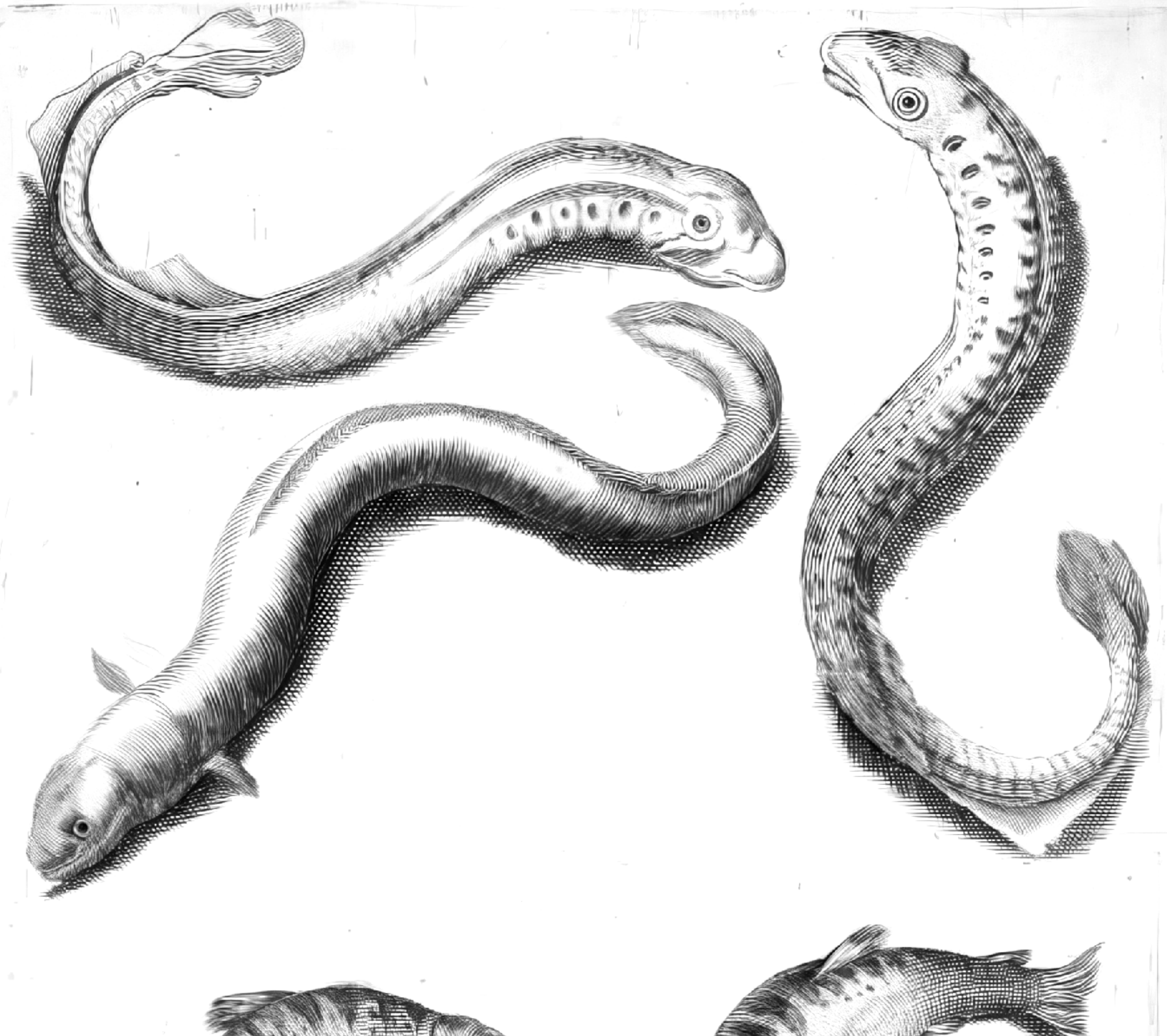
XXXIII

Ro. de Vorst ſculp.

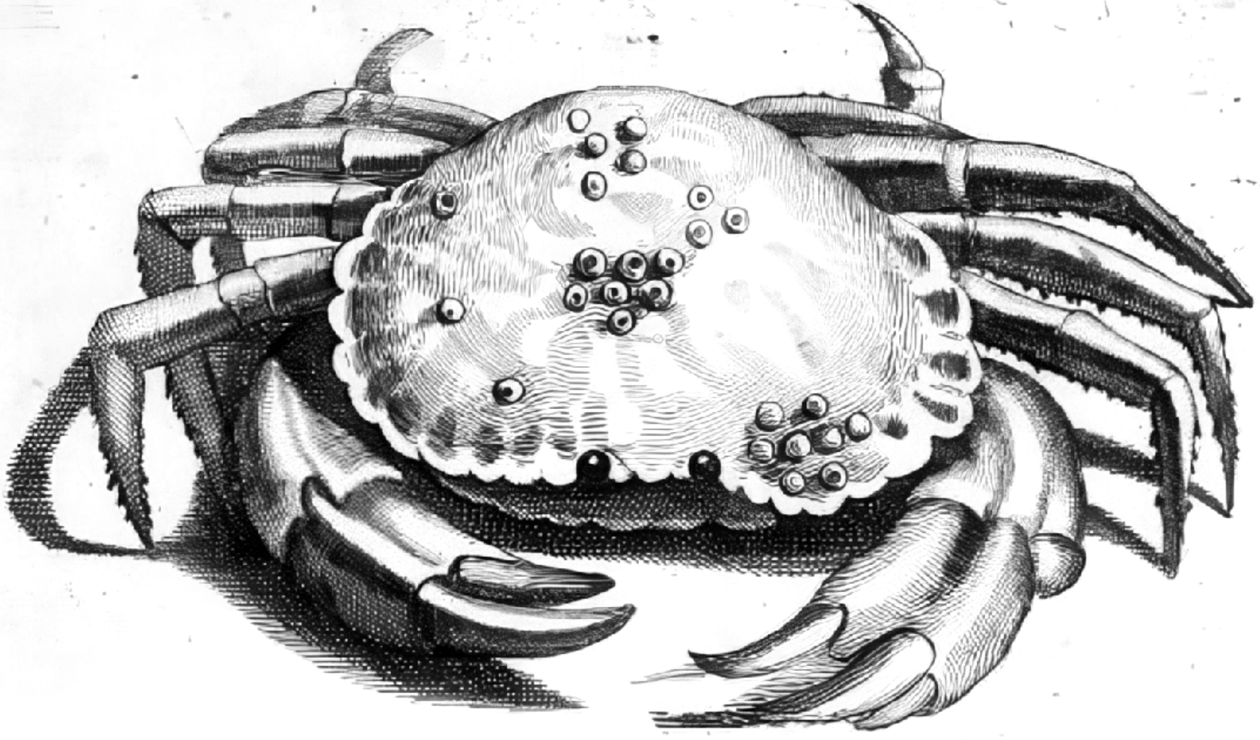


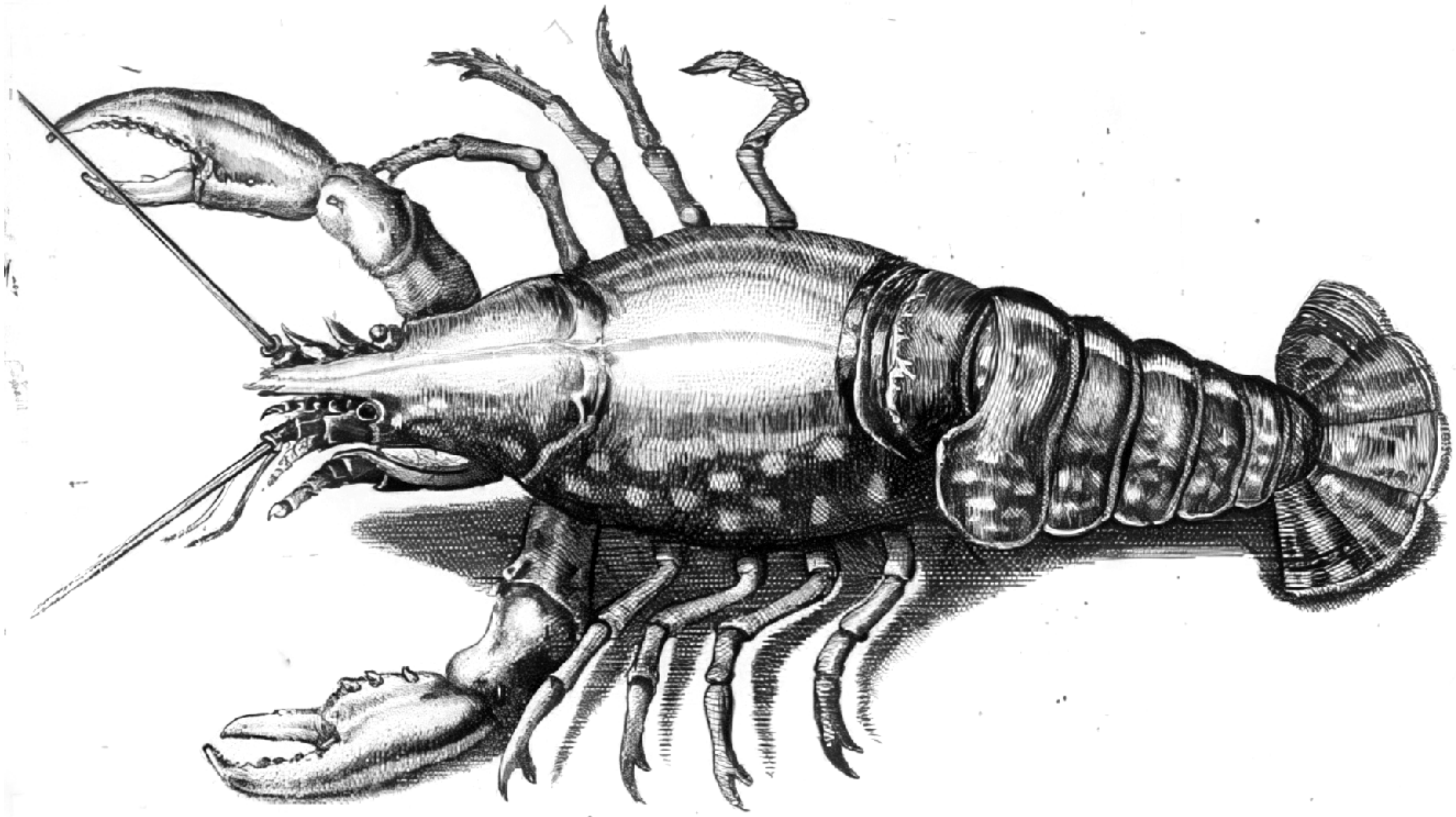


III

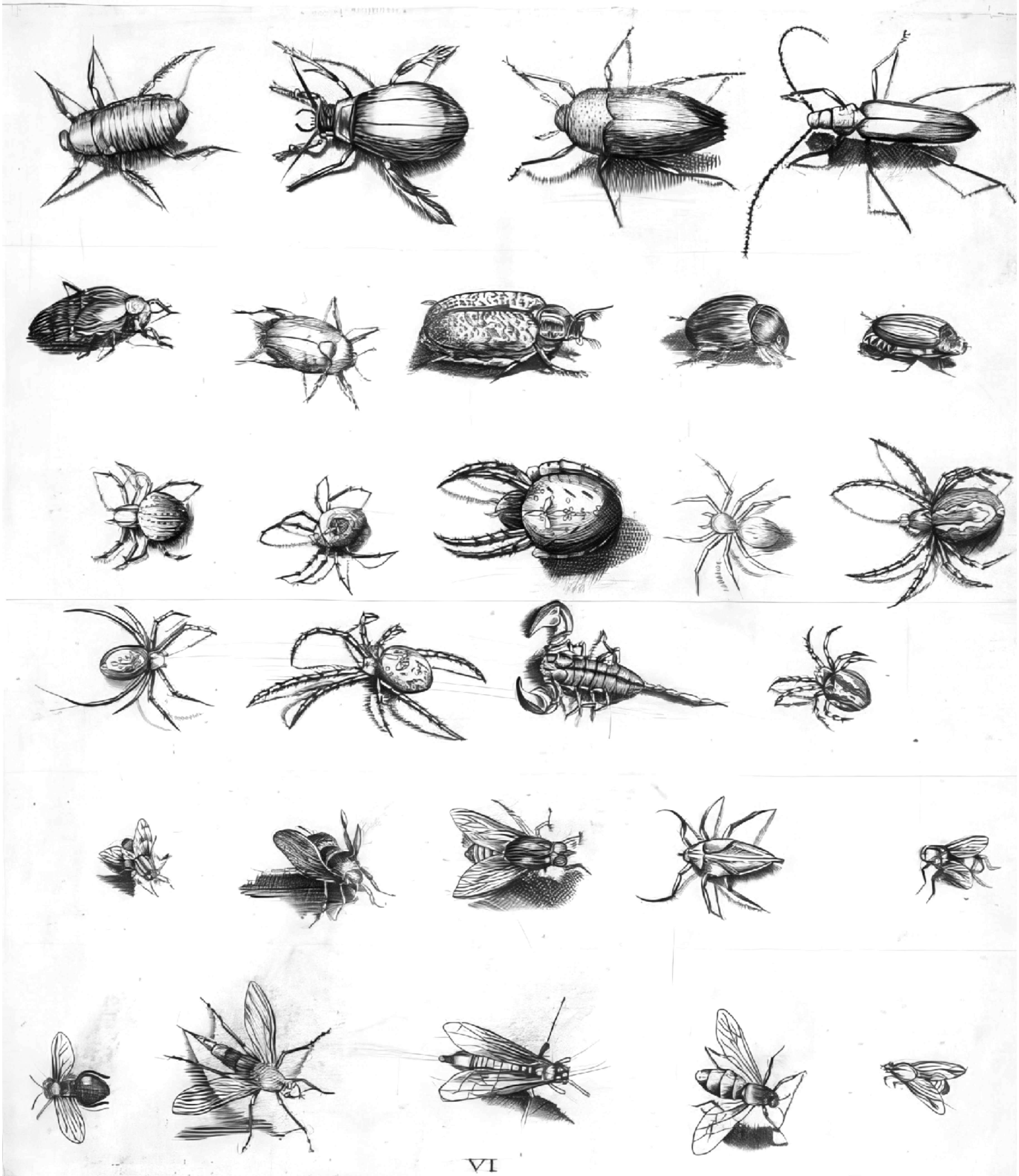


IIII

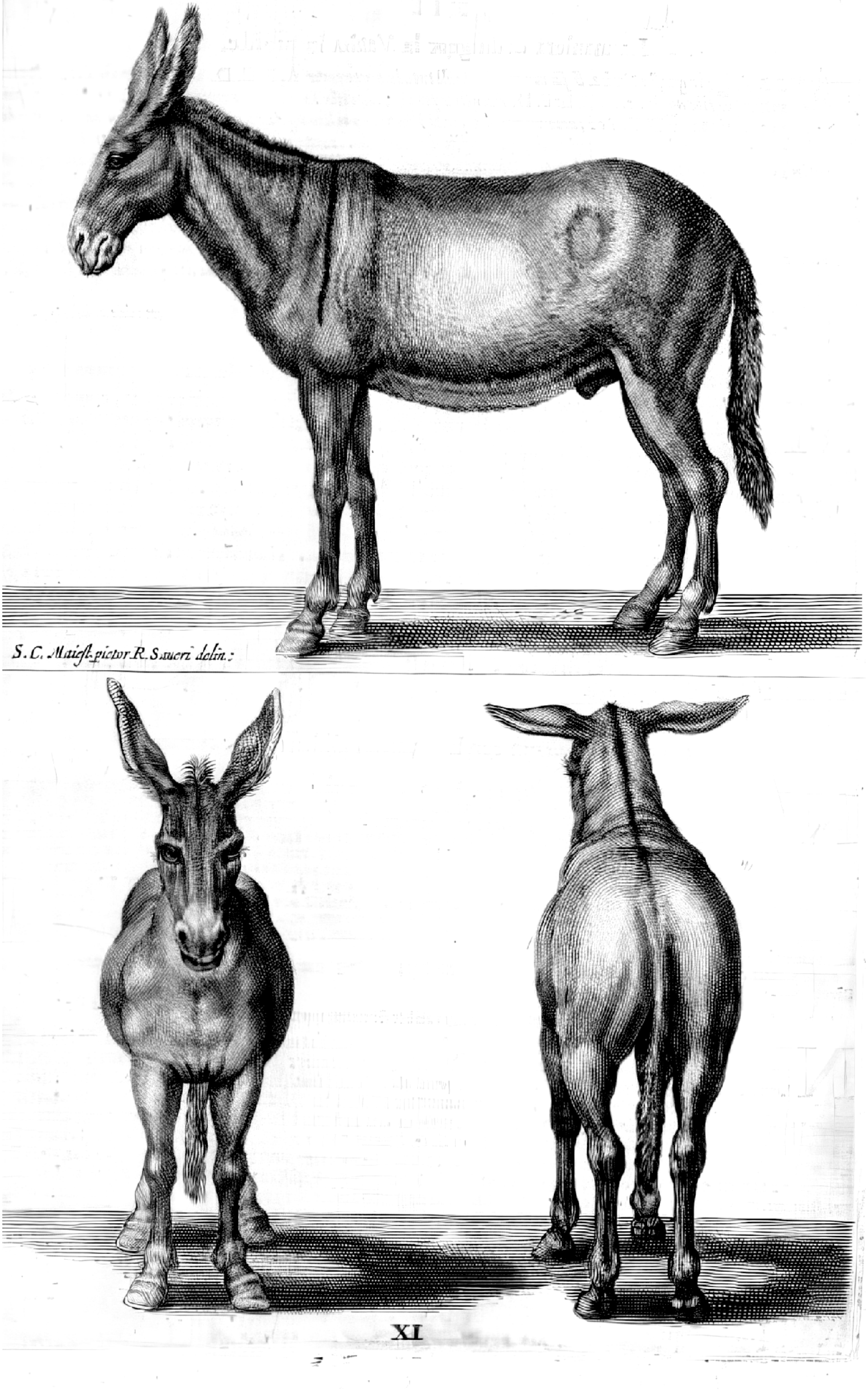




V

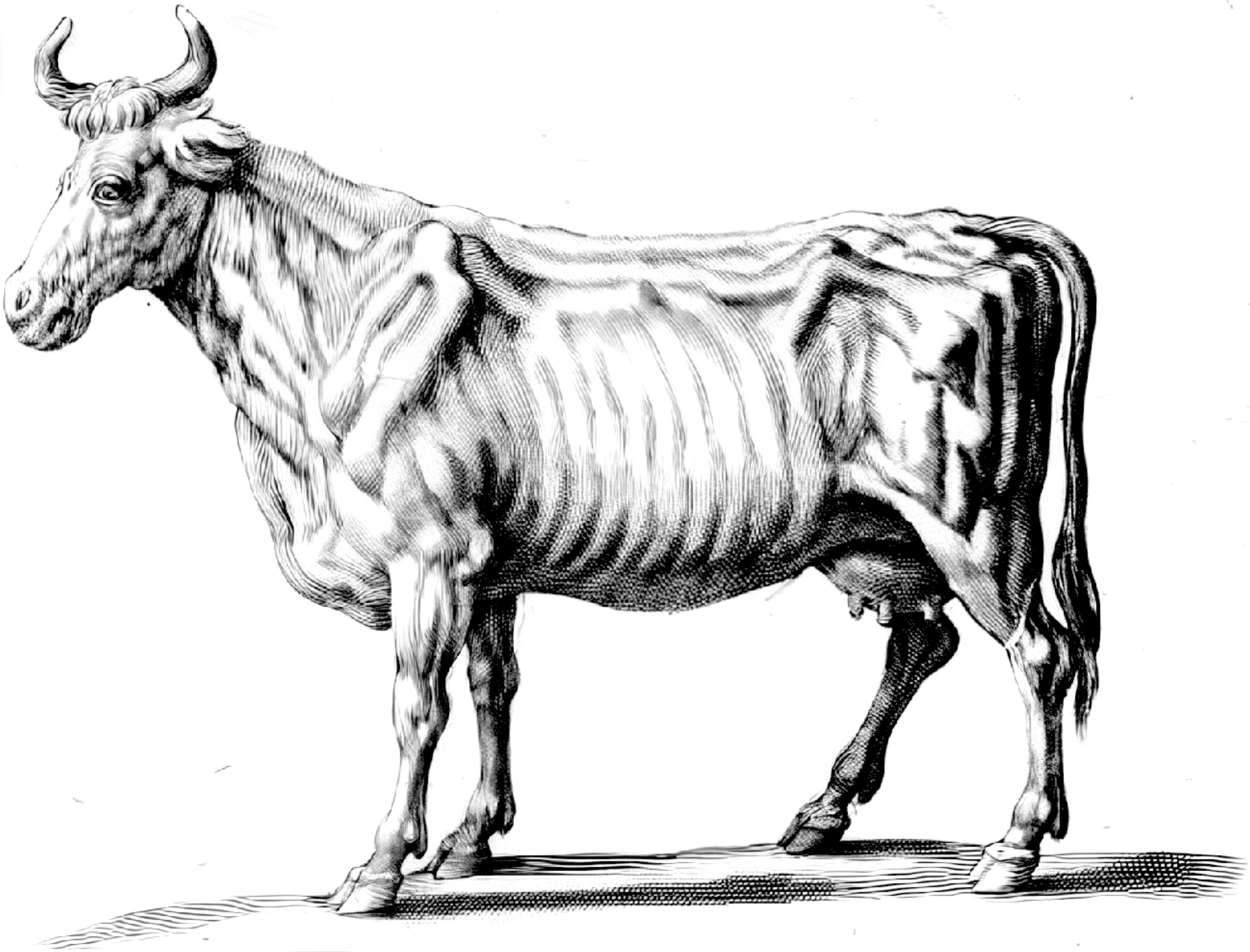


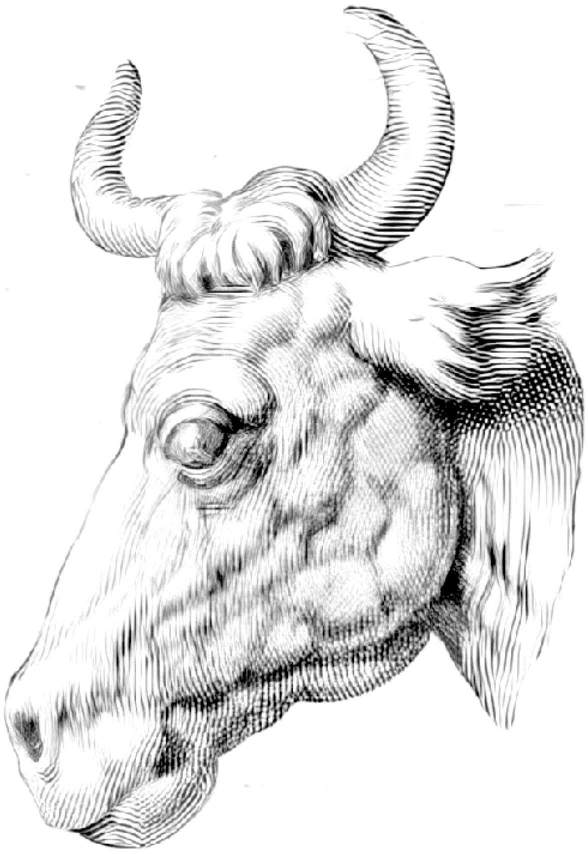
VI

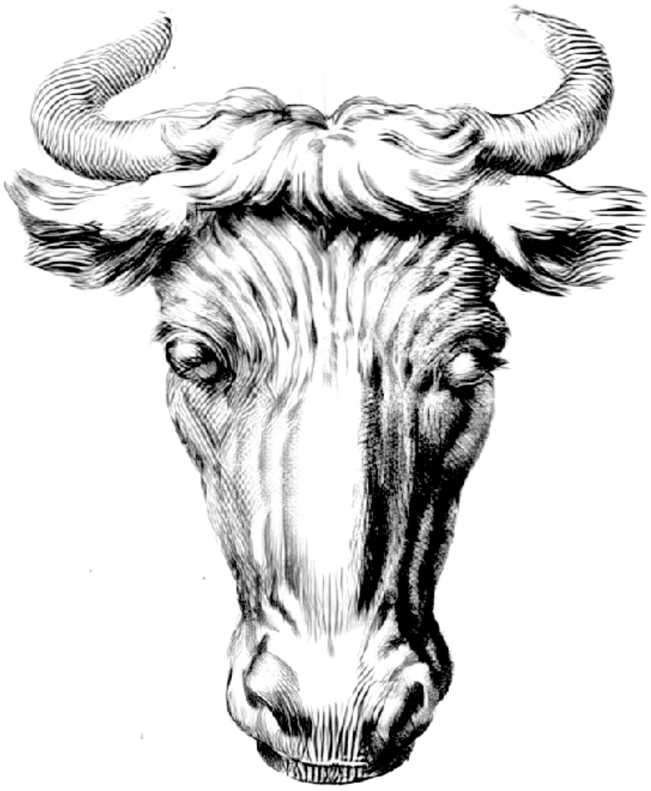


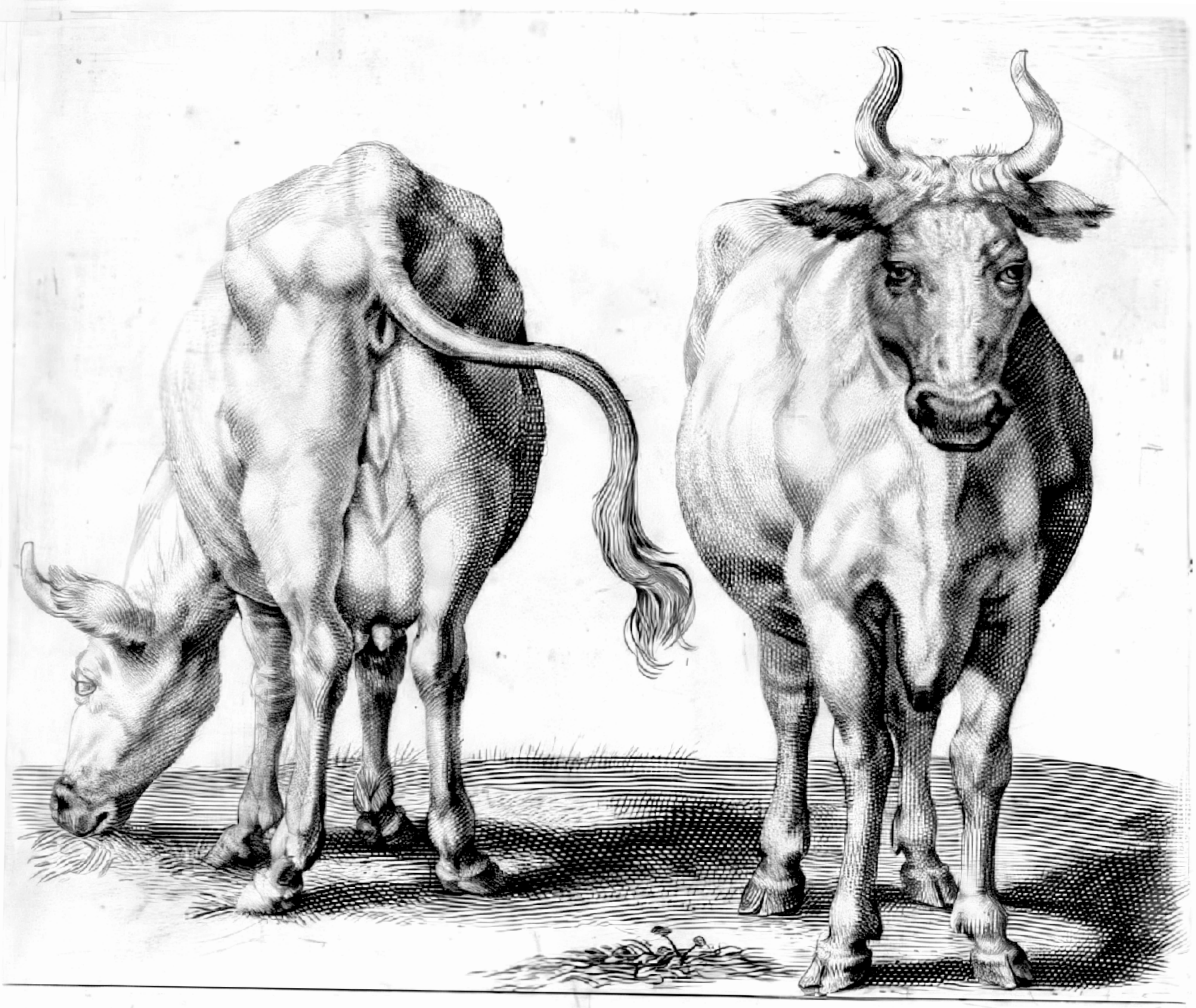
S.C. Maieſt. pictor R. Saueri delin:

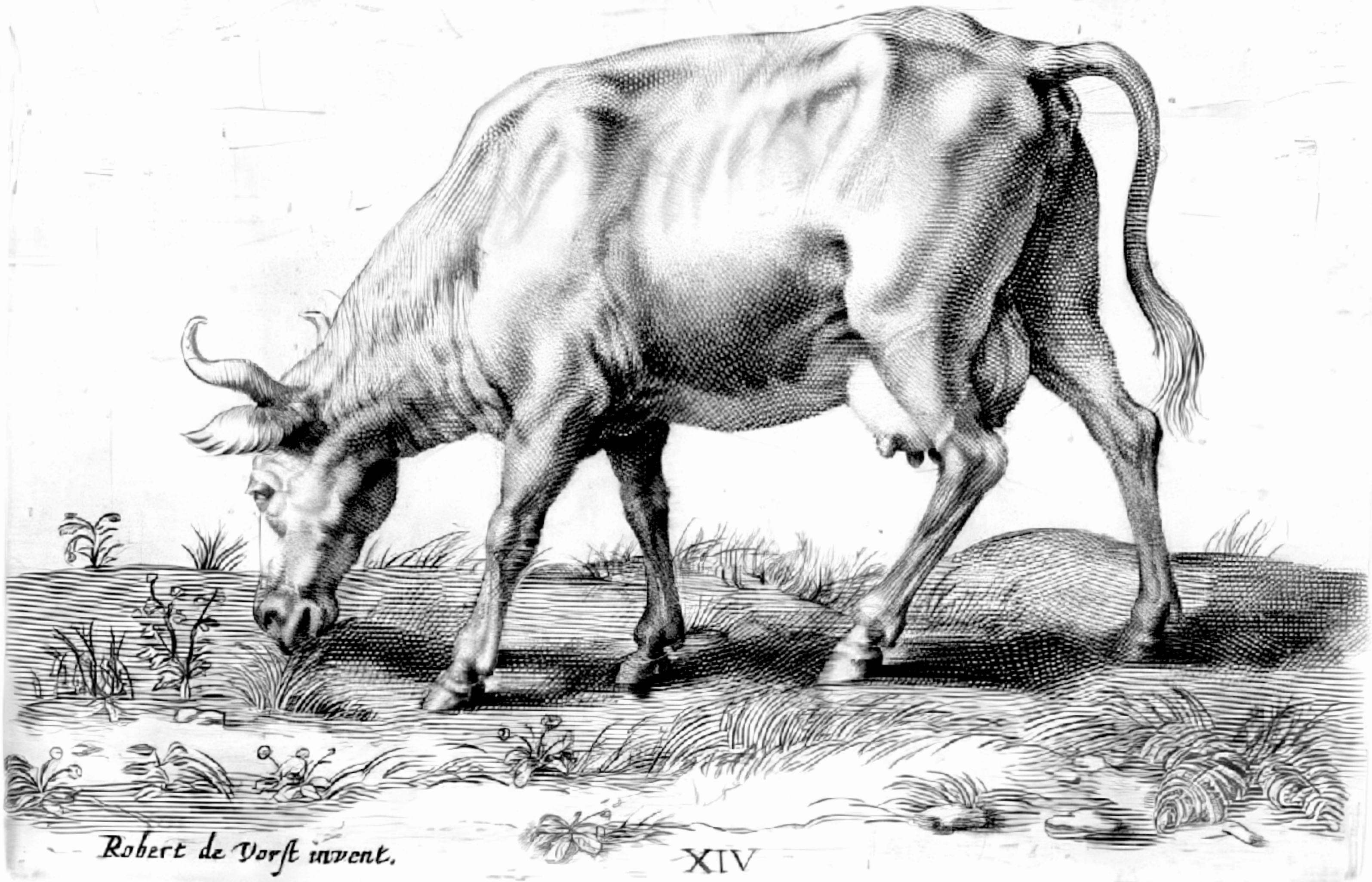
XI



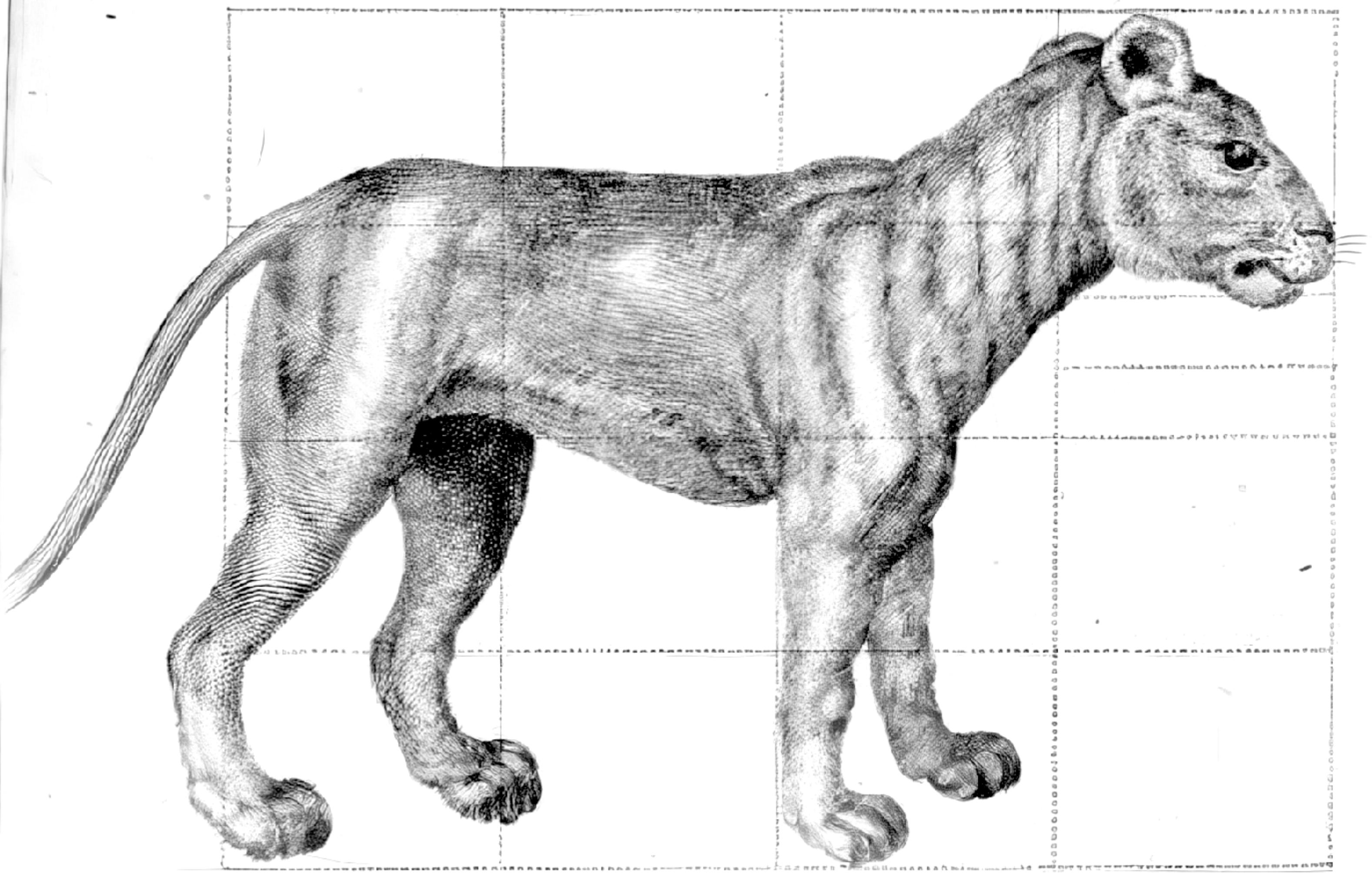


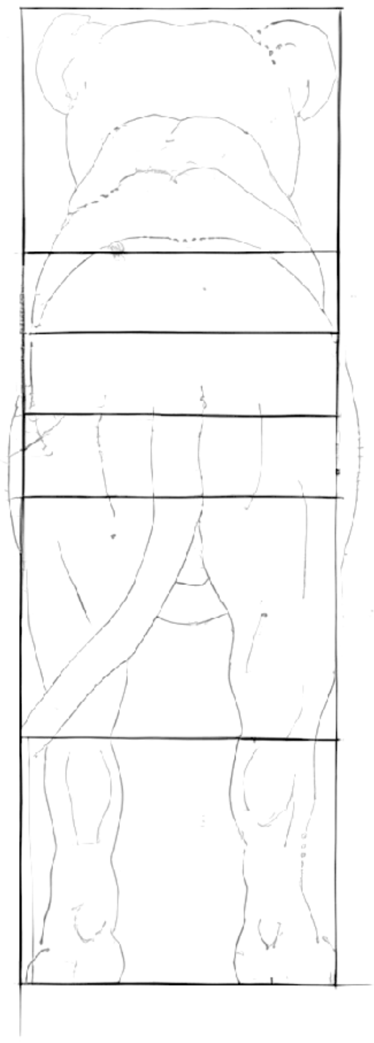


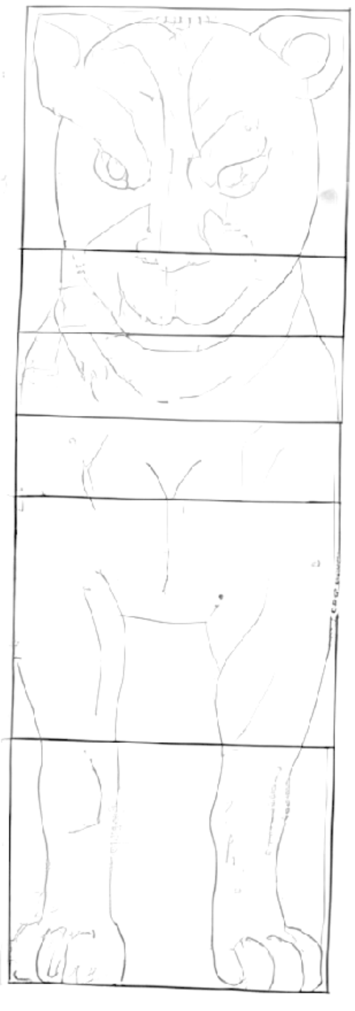



Robert de Vorſt invent.

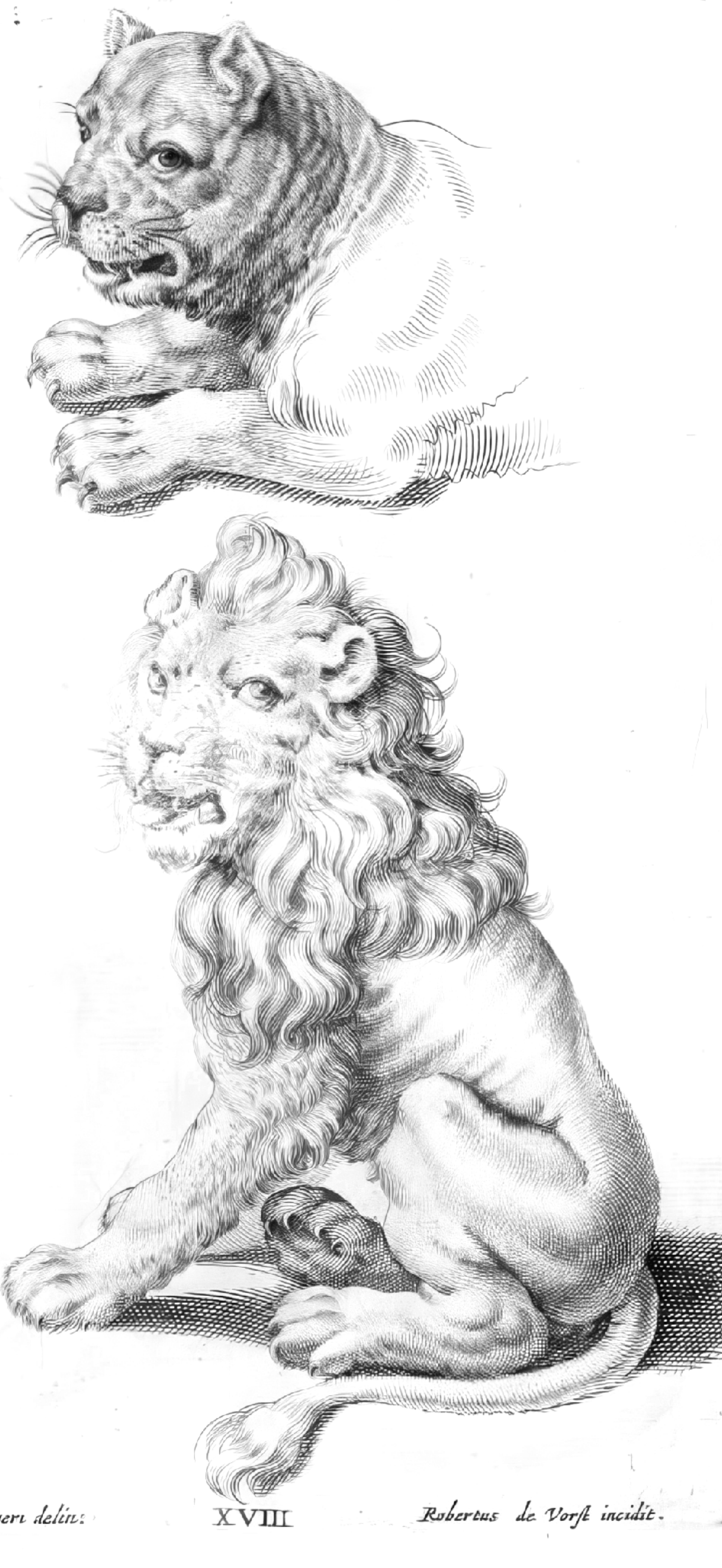
XIV



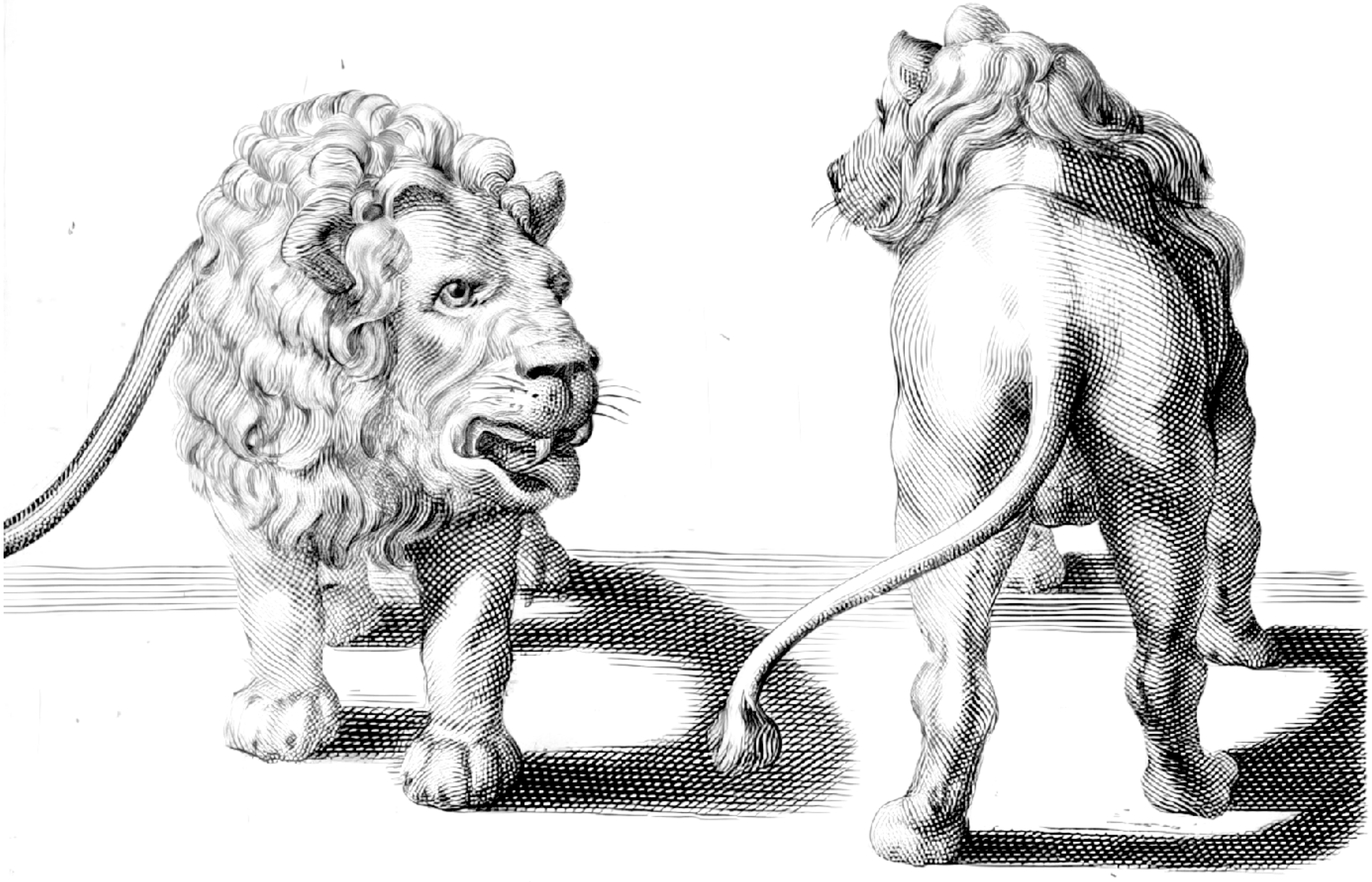


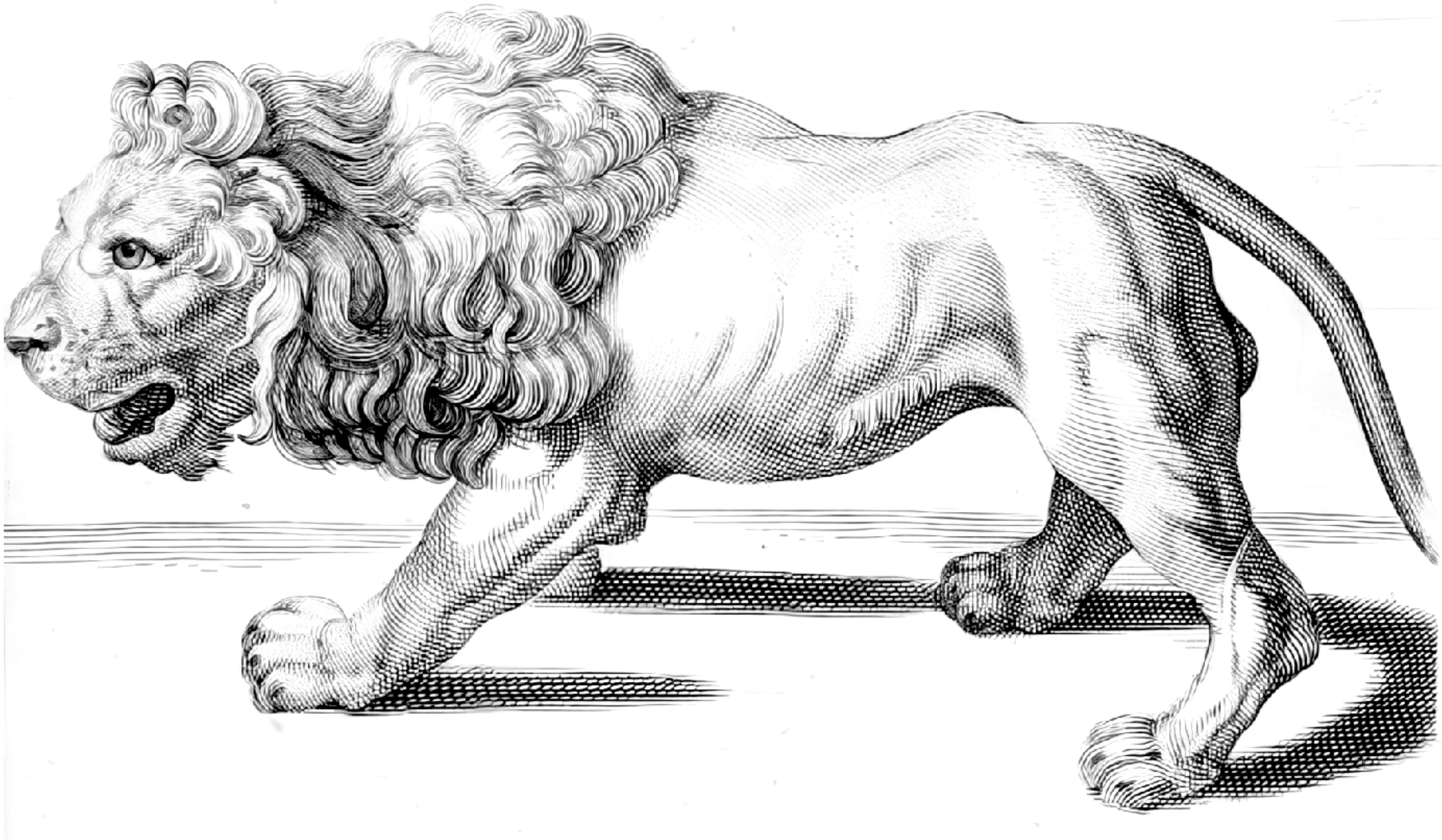


XV

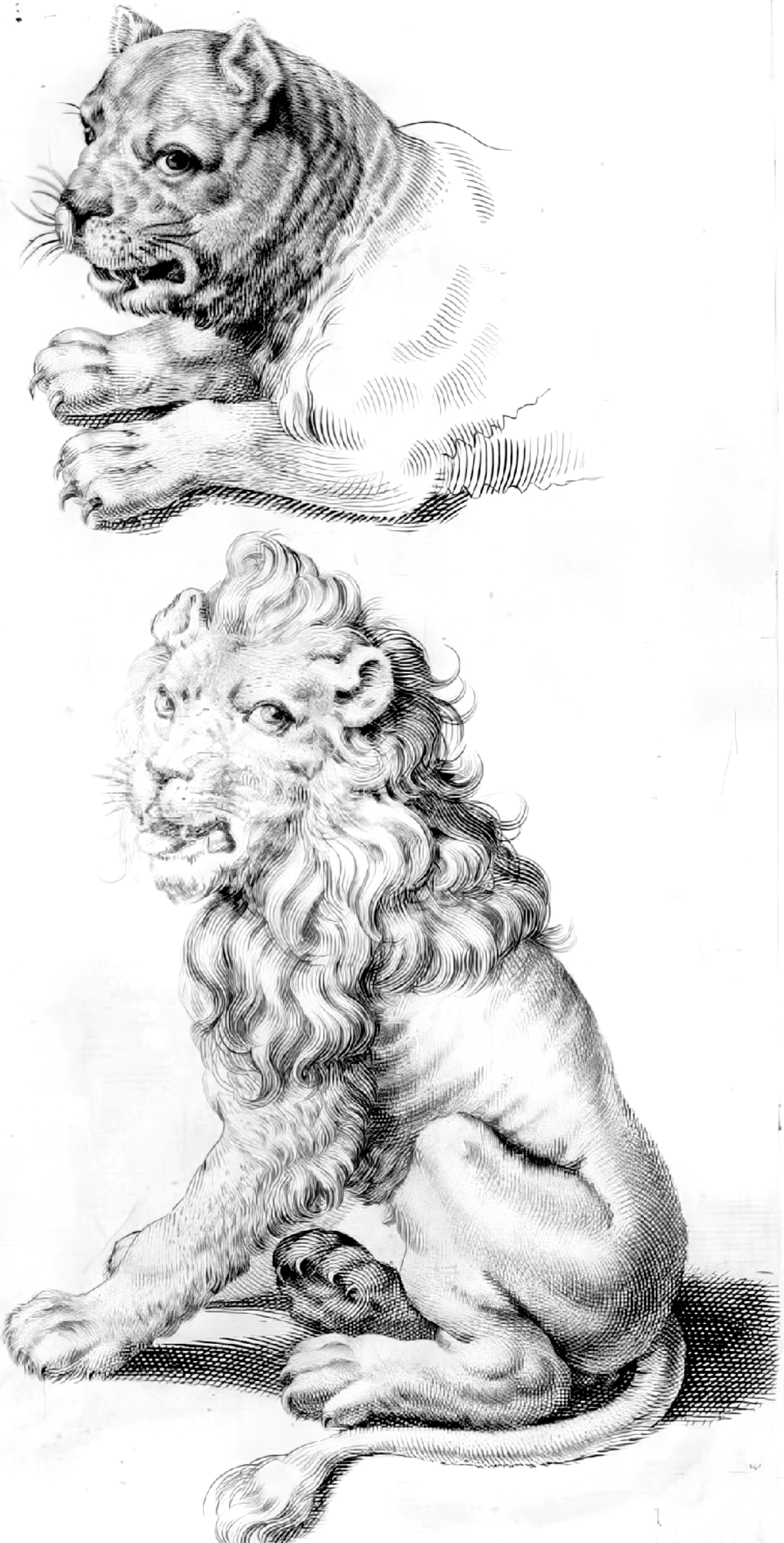


S. C. M. pictor Roelant Saueri delin: XVIII Robertus de Vorſt incidit.

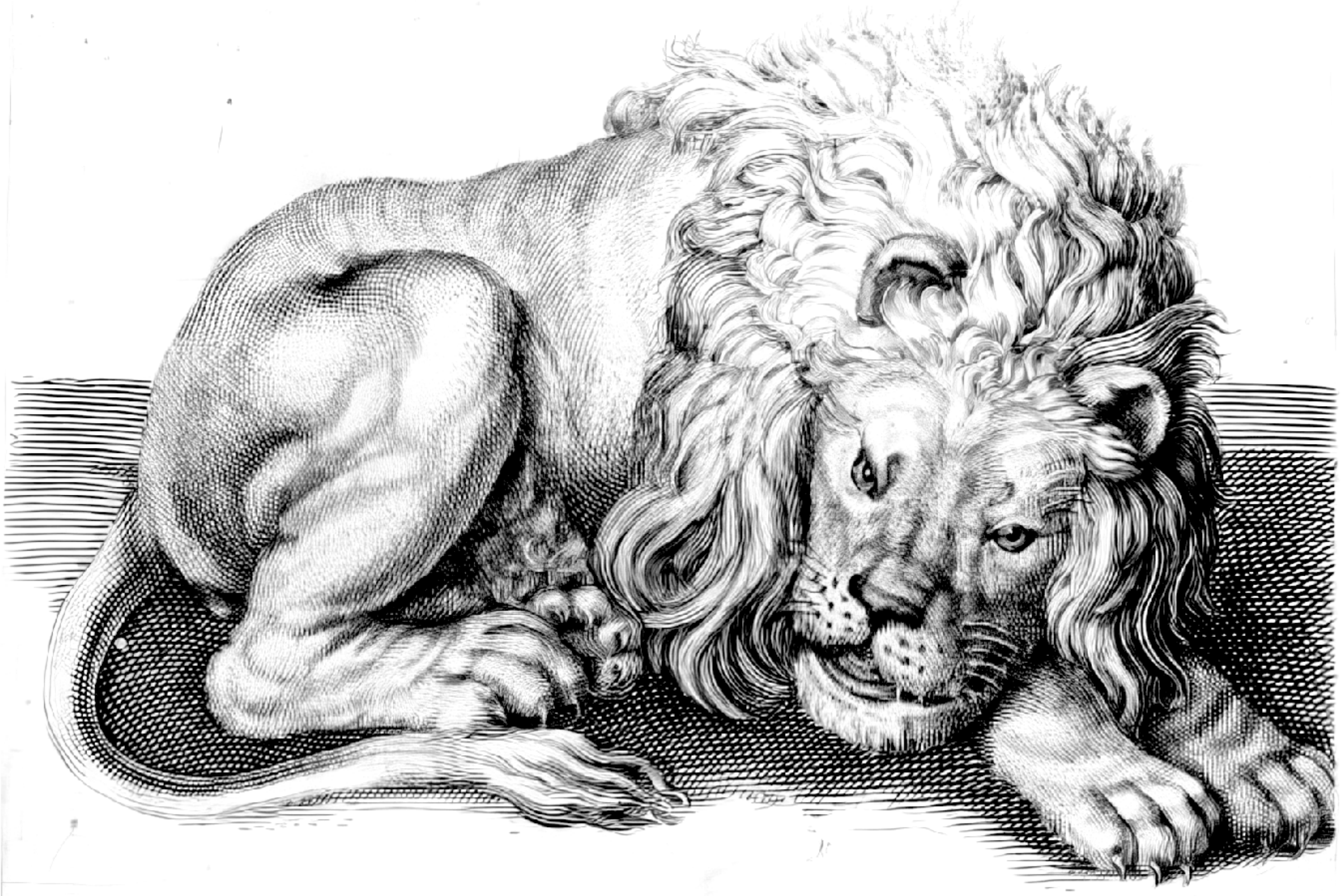


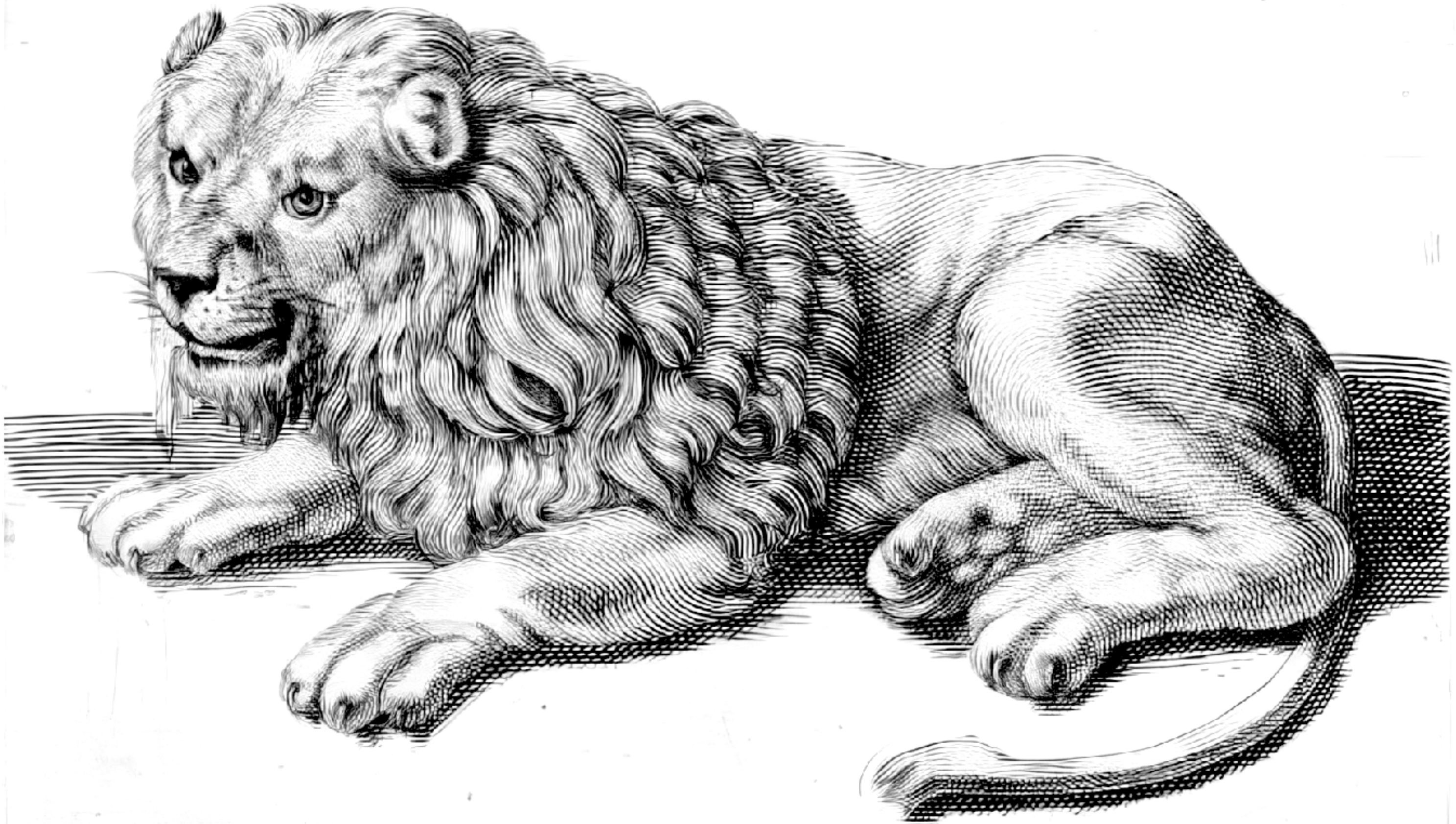


.XVII.

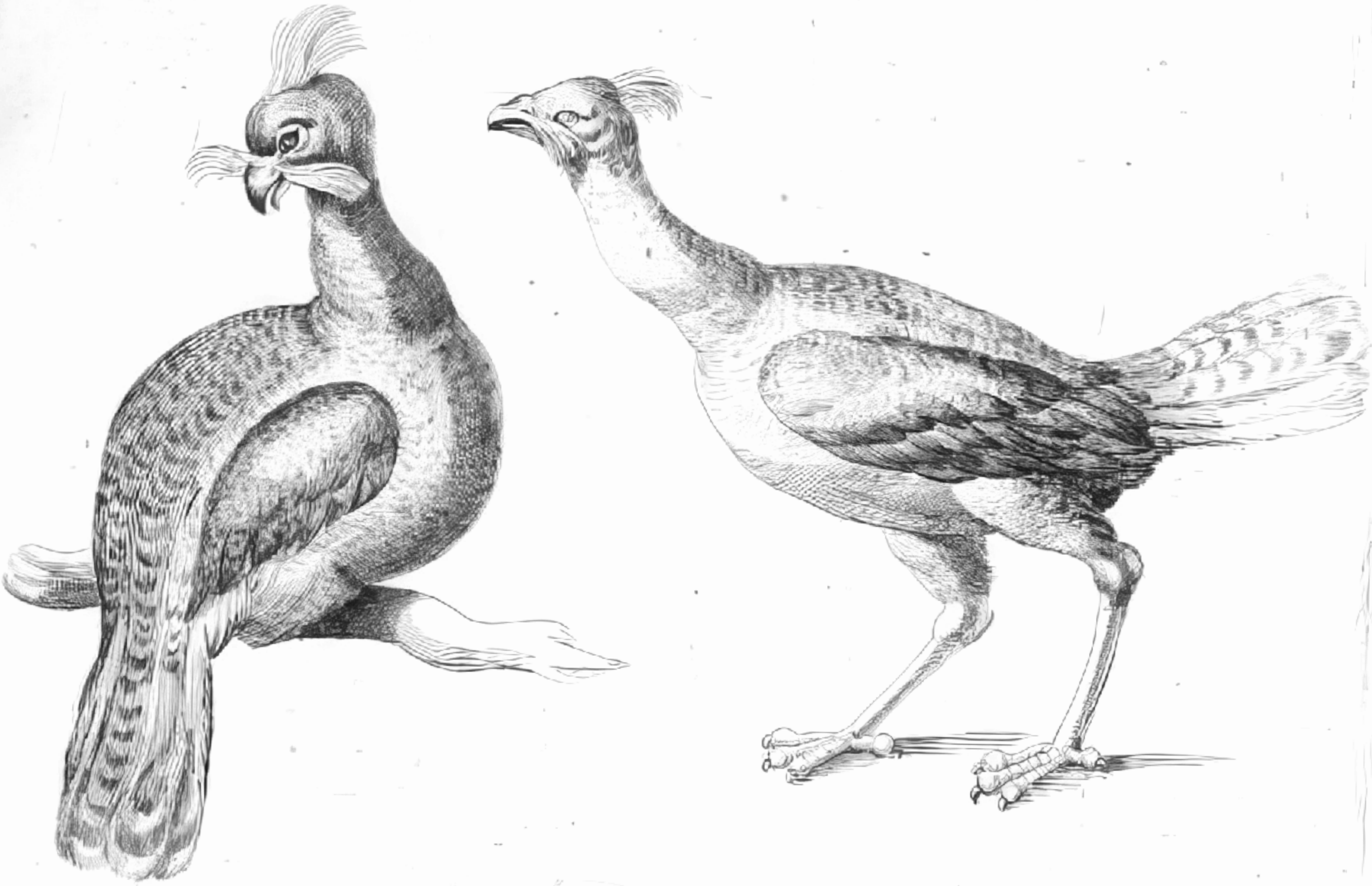


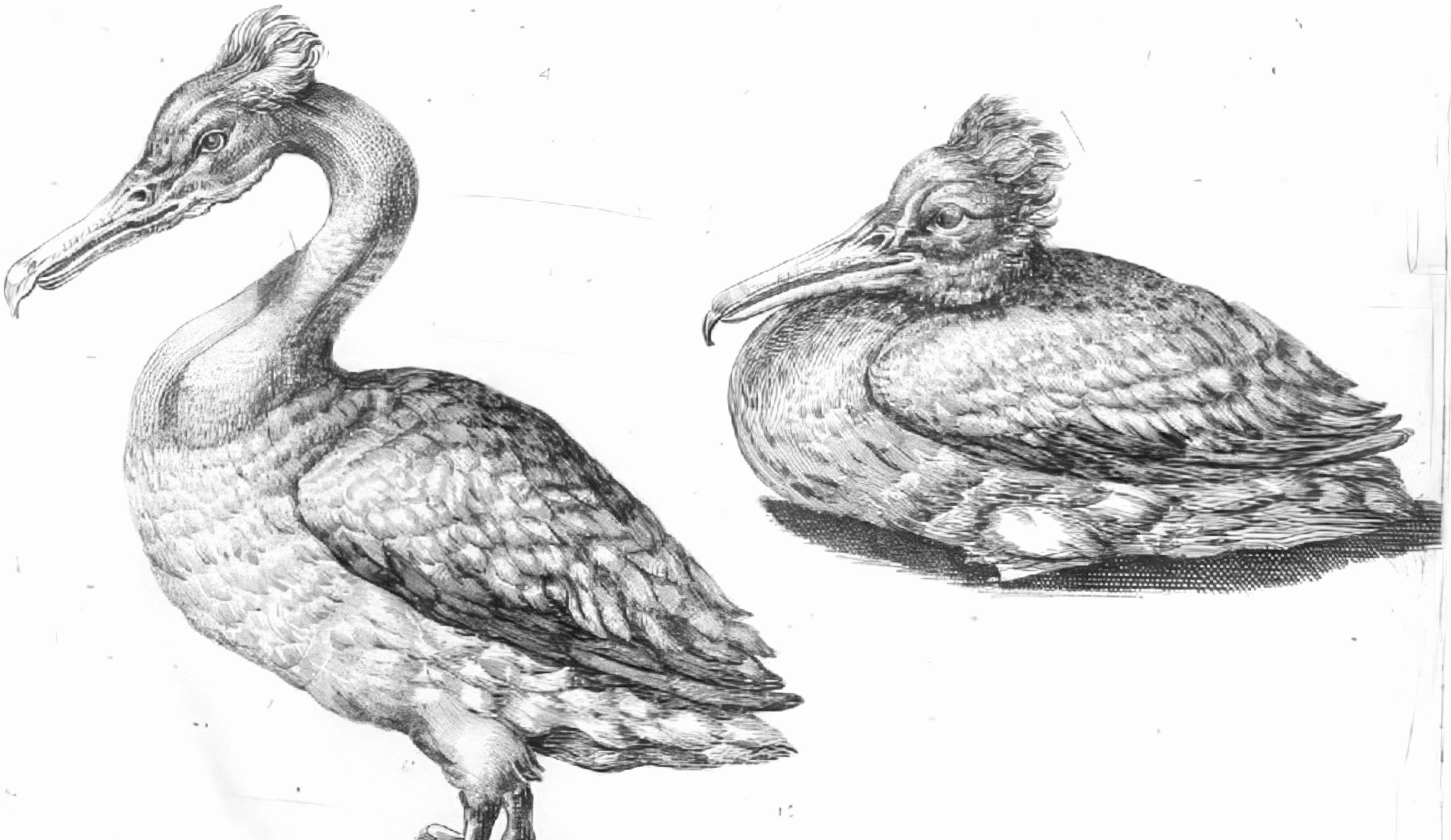
S. C. M. pictor Roelant Saueri delin: XVIII *Robertus de Vorſt incidit.*

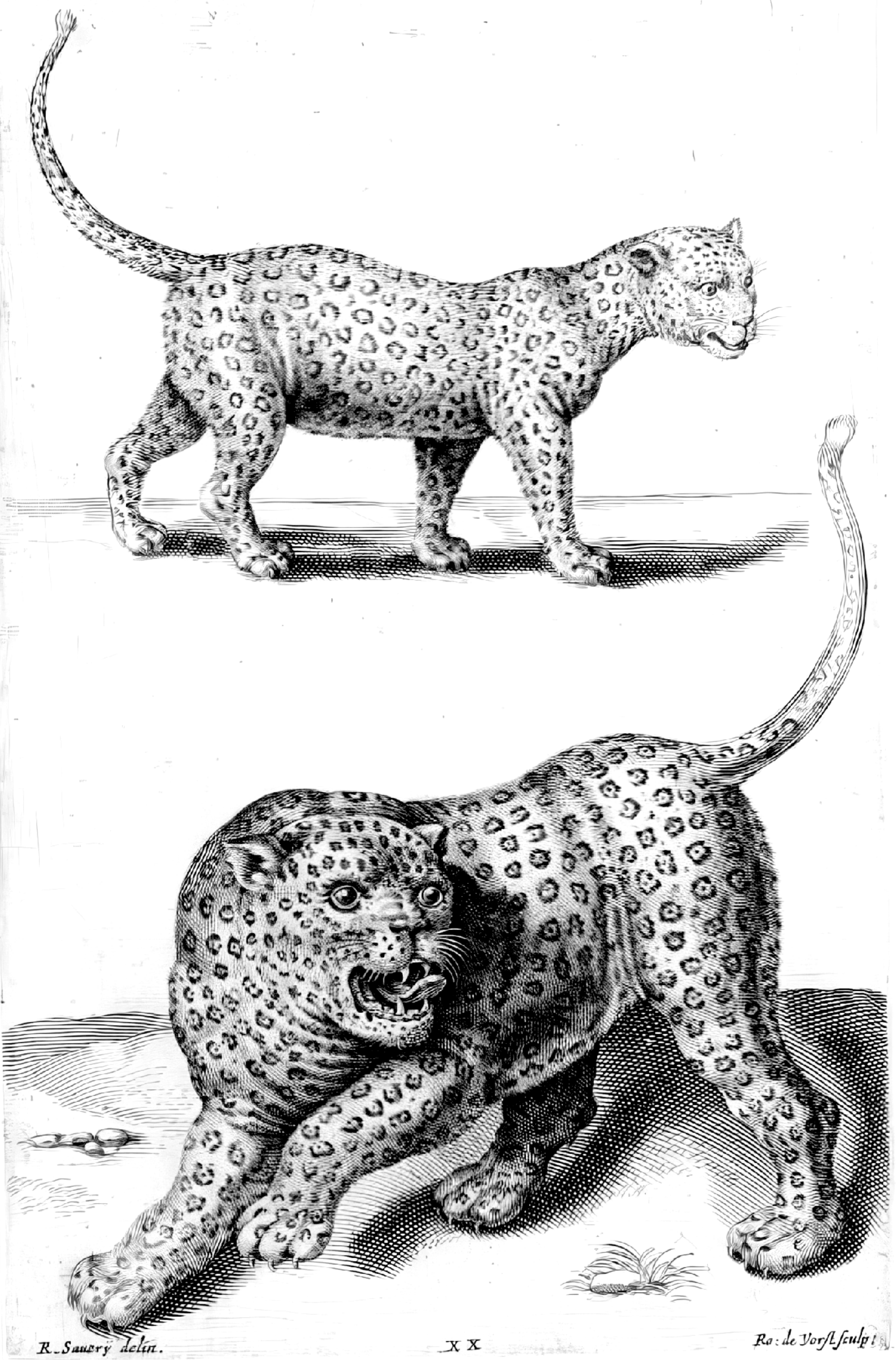




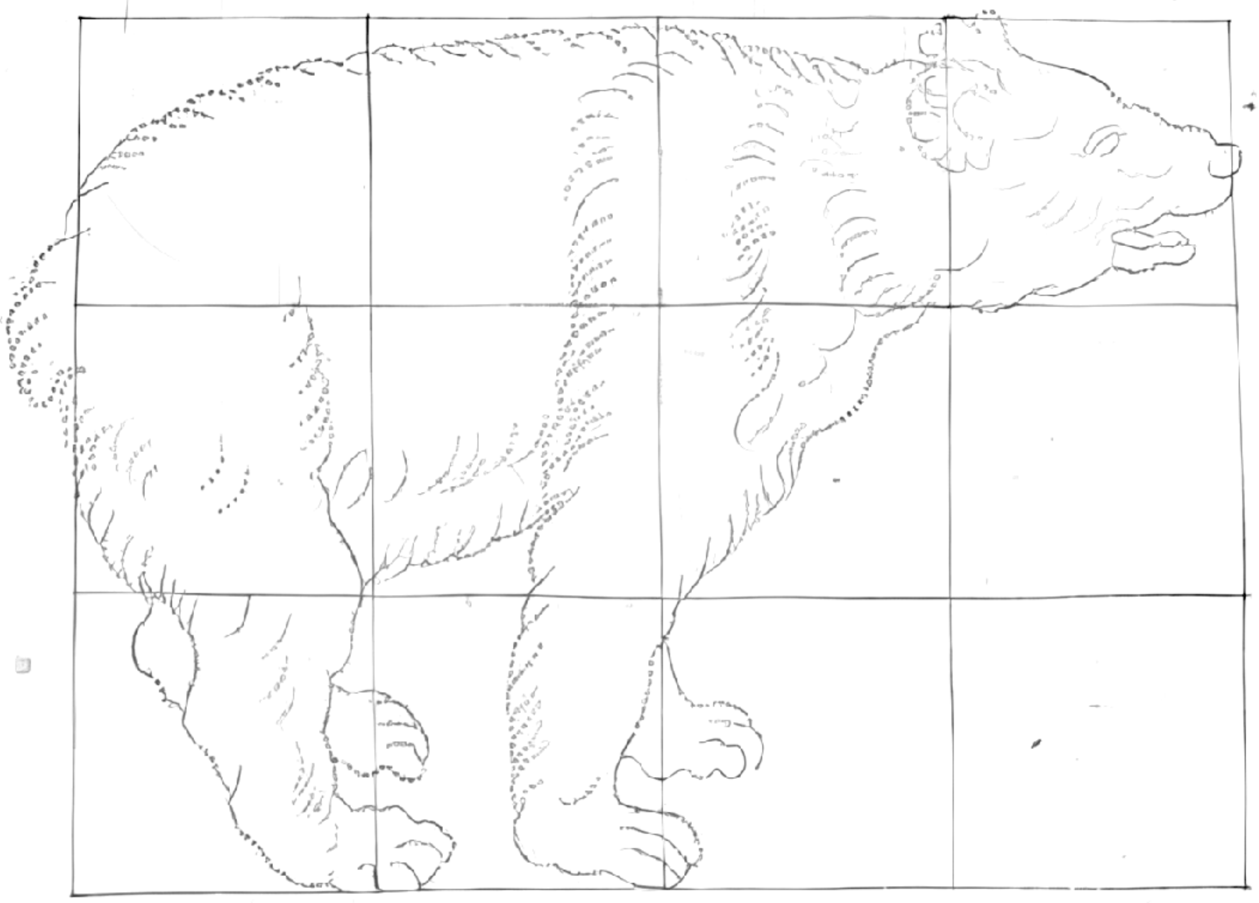
R. de Vorſt incidit XIX R. Zavery delin:

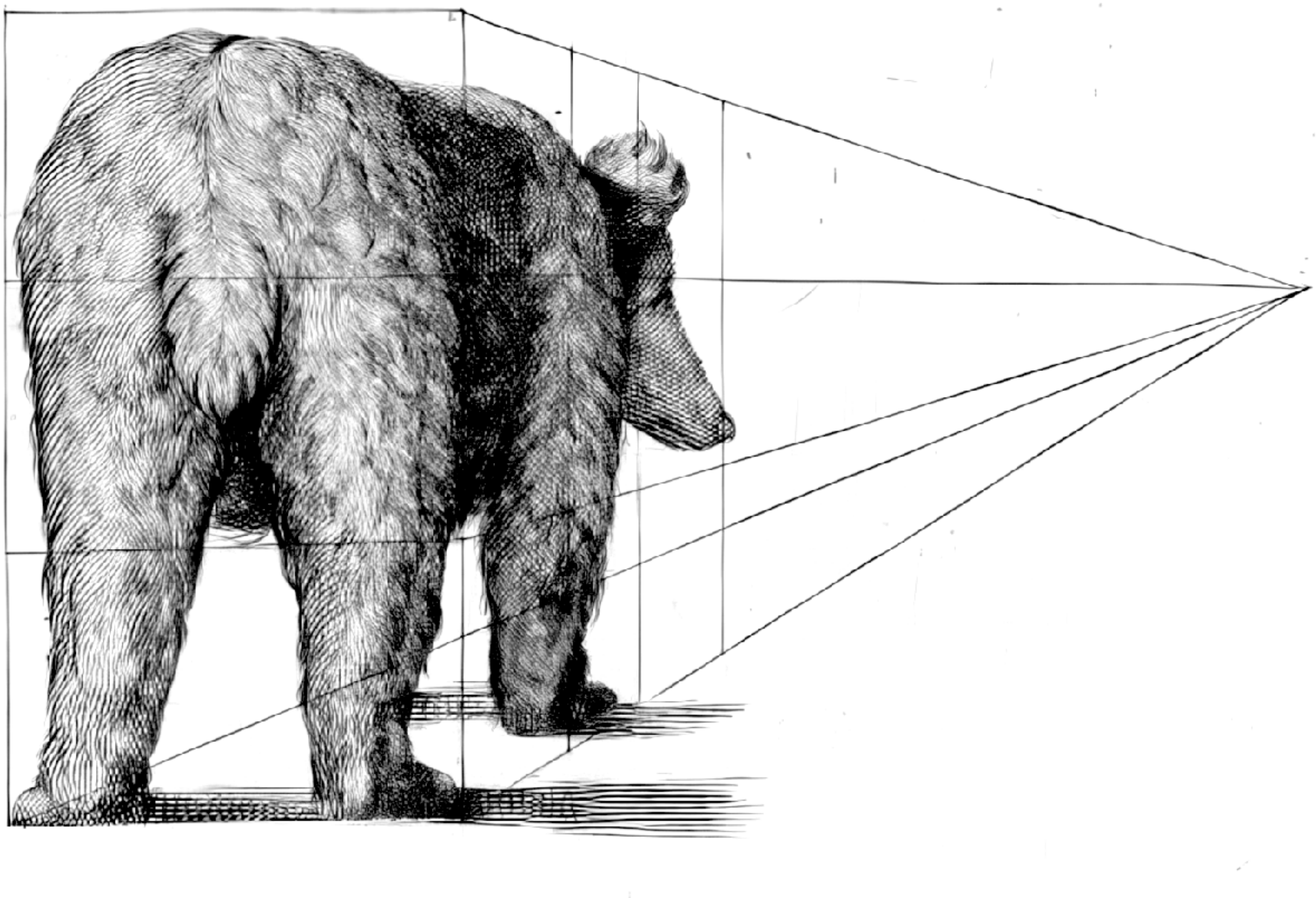


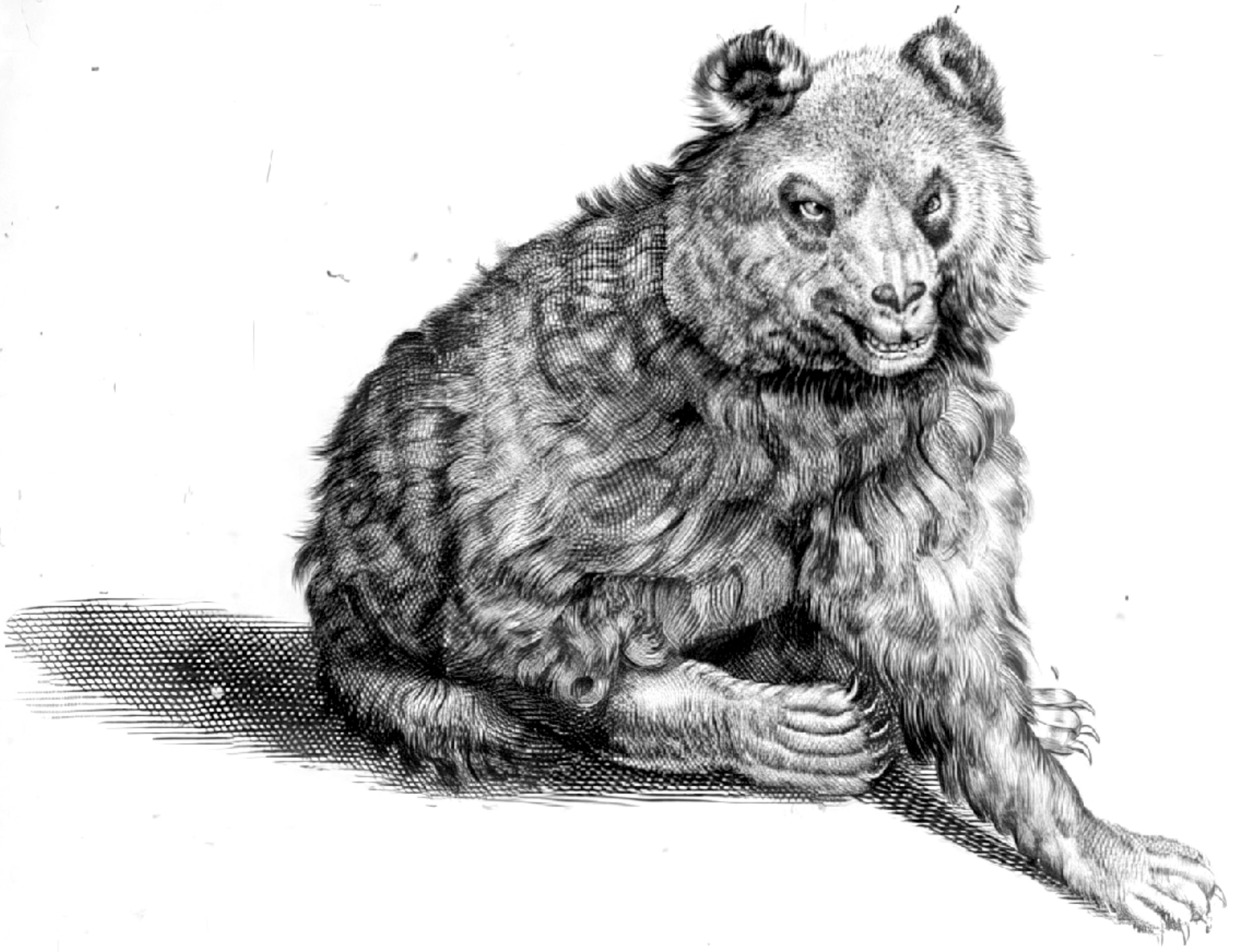


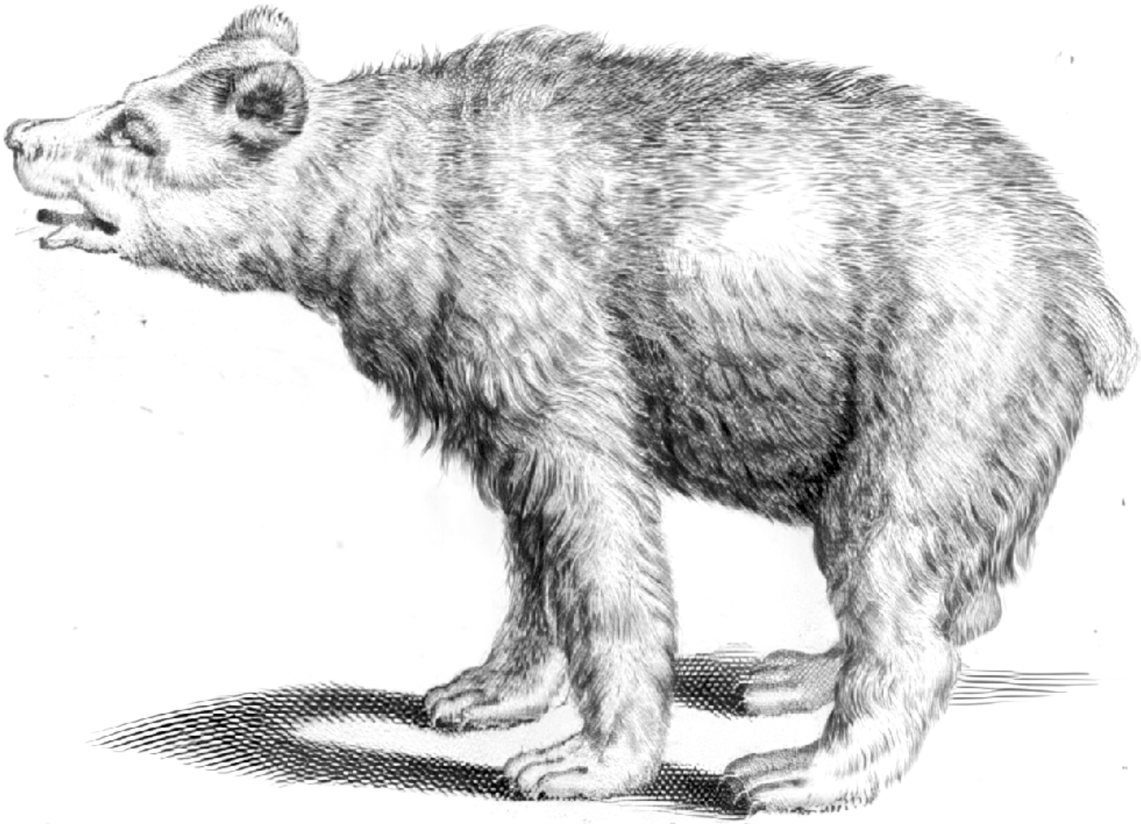


R. Savery delin. XX Ro: de Vorſt ſculp:

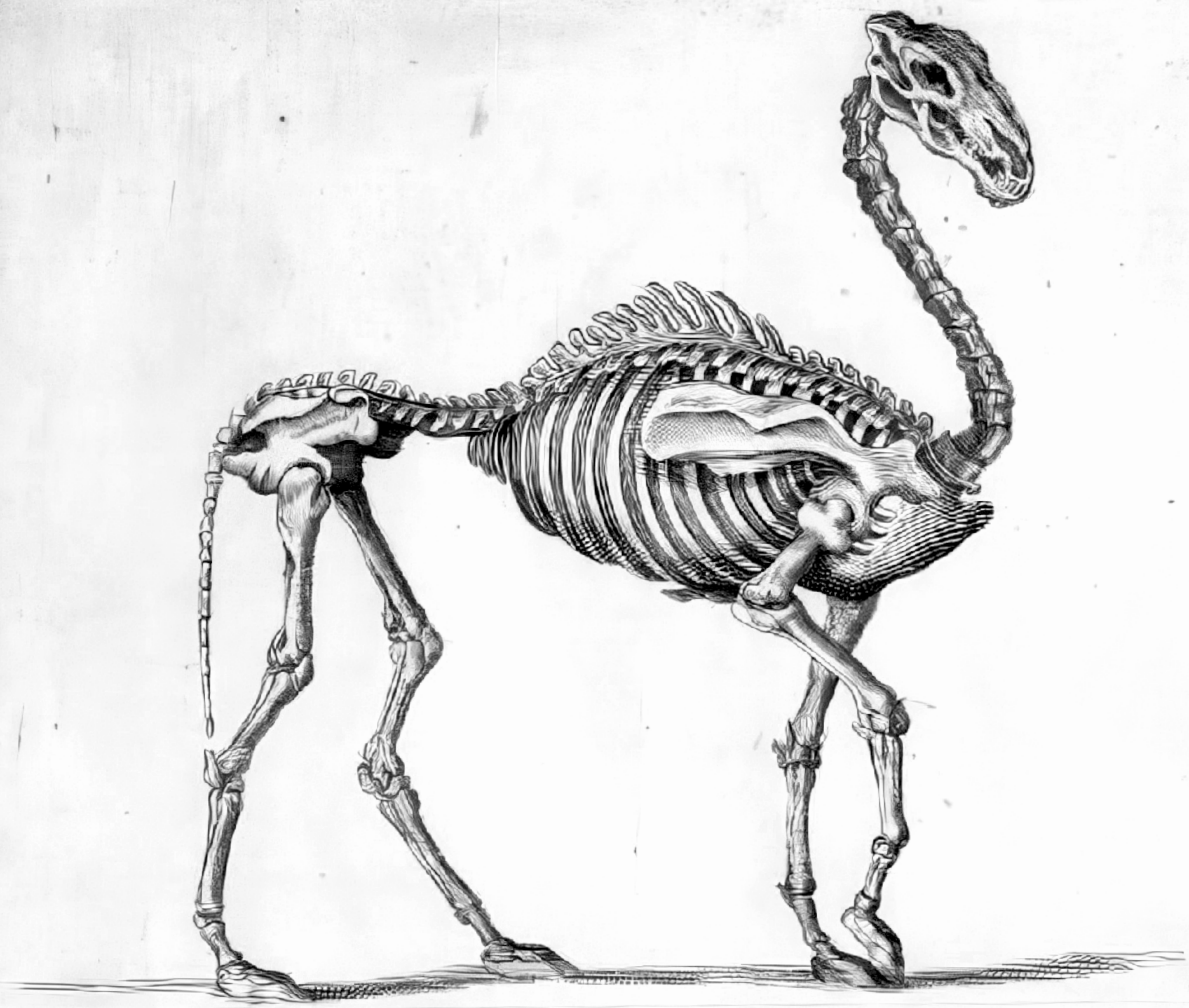


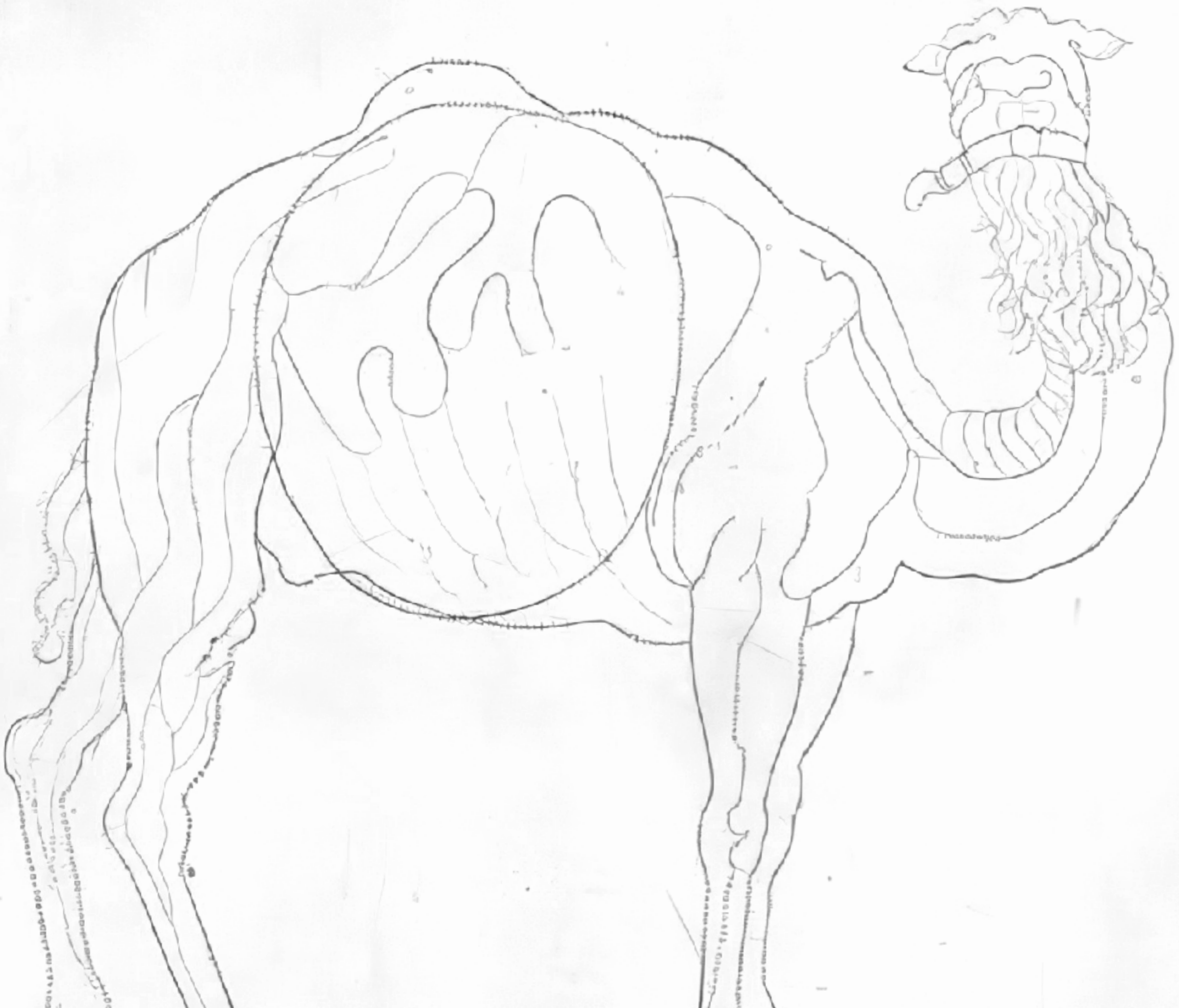




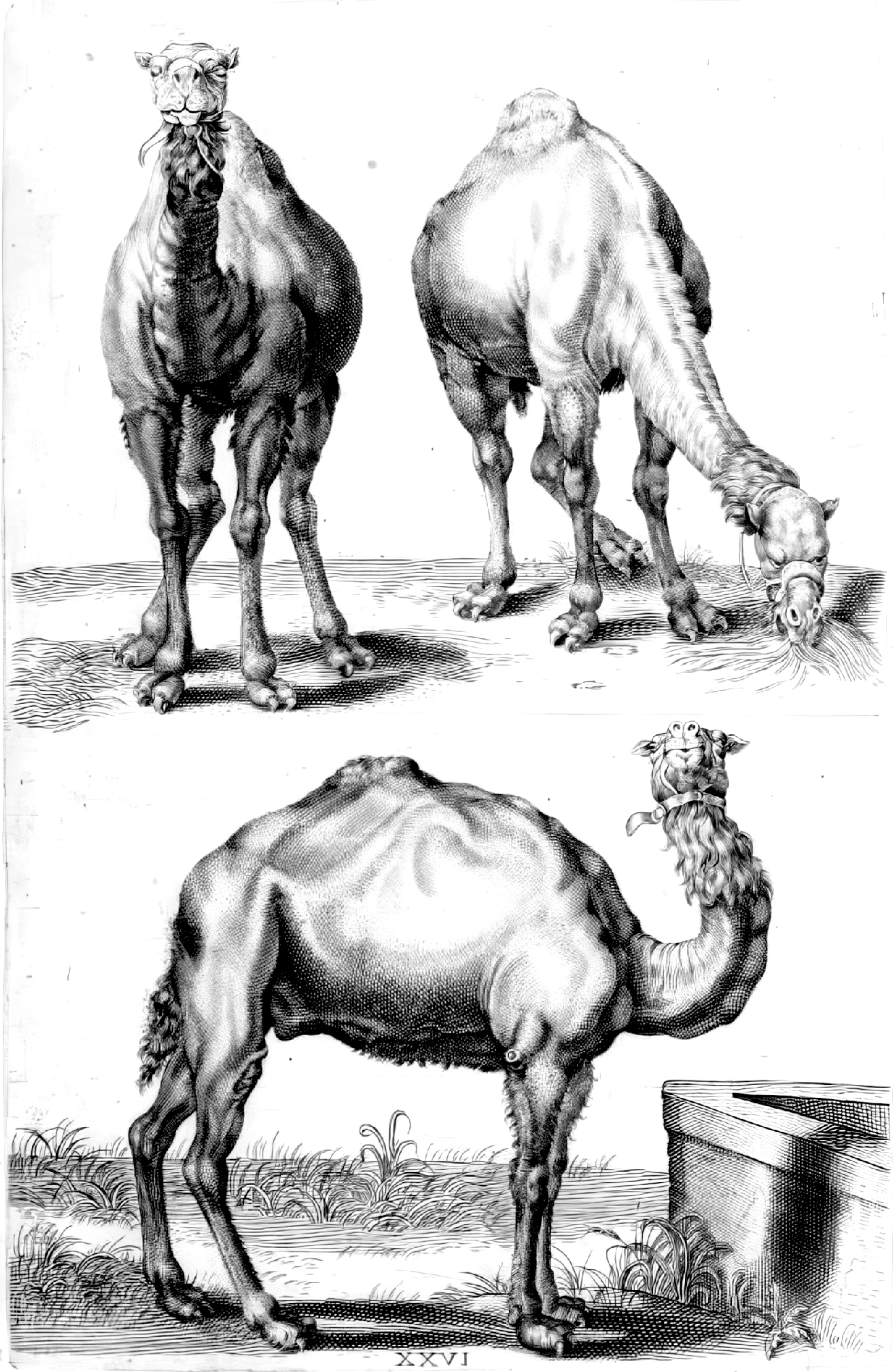


XXII

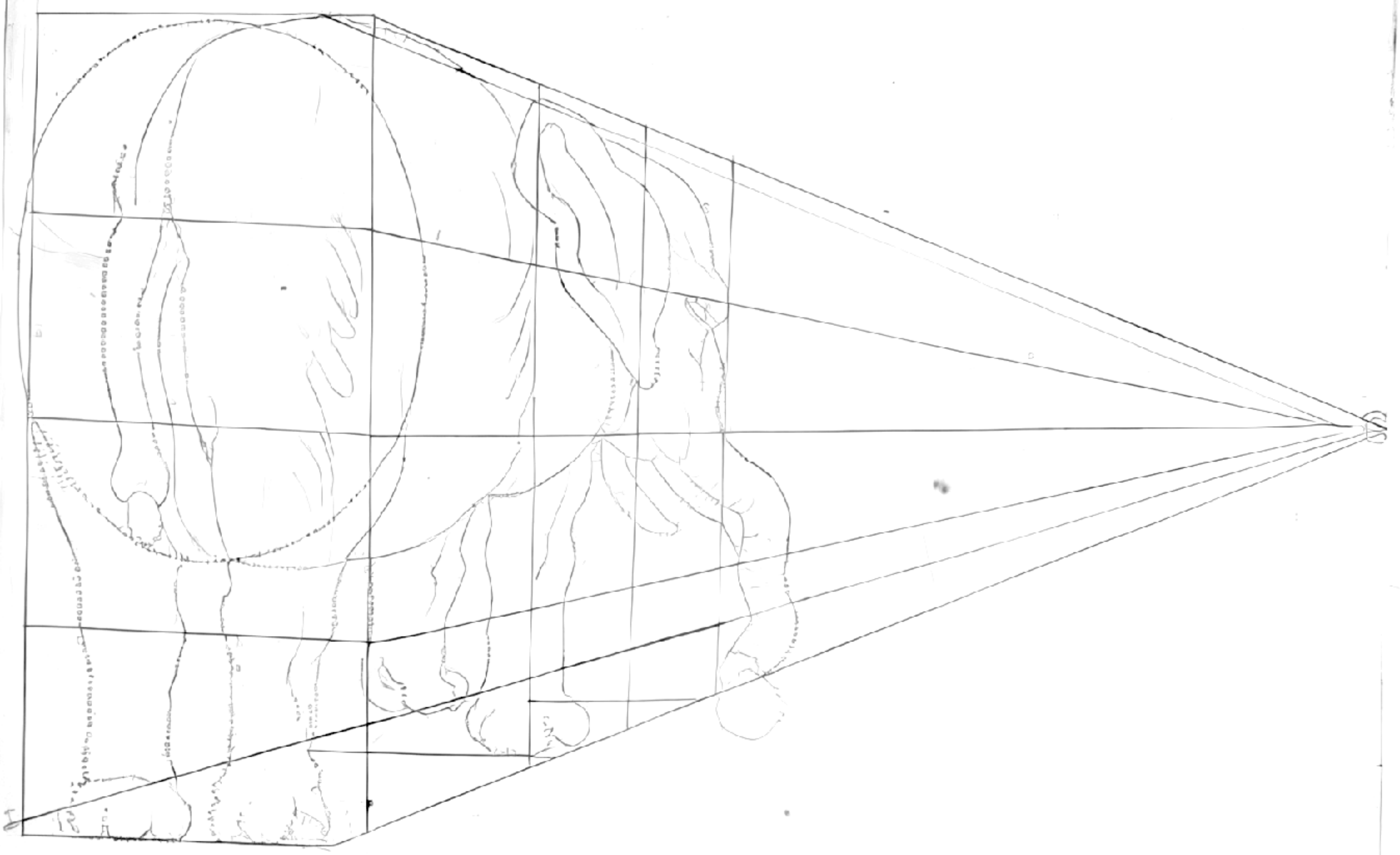


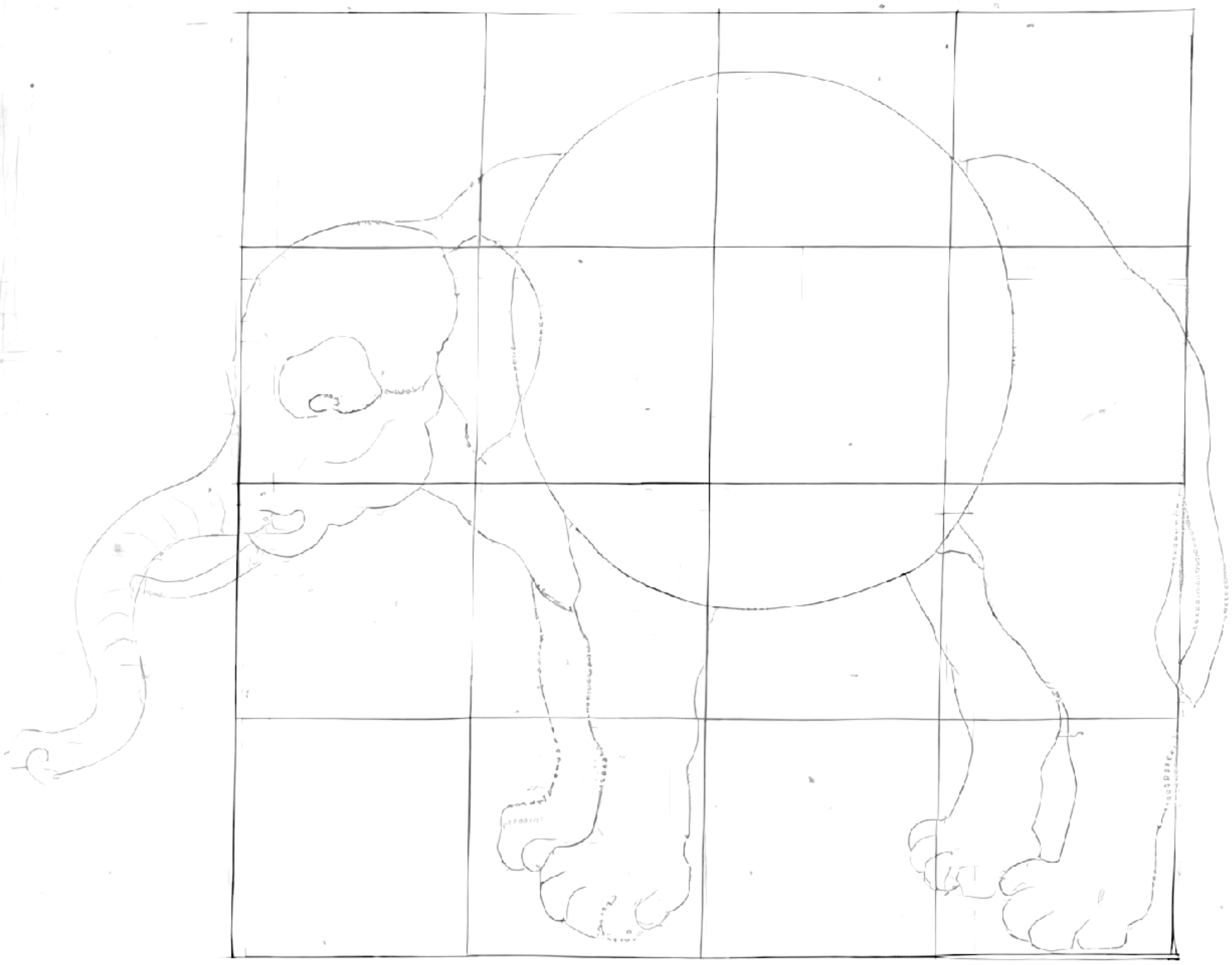


XXV.

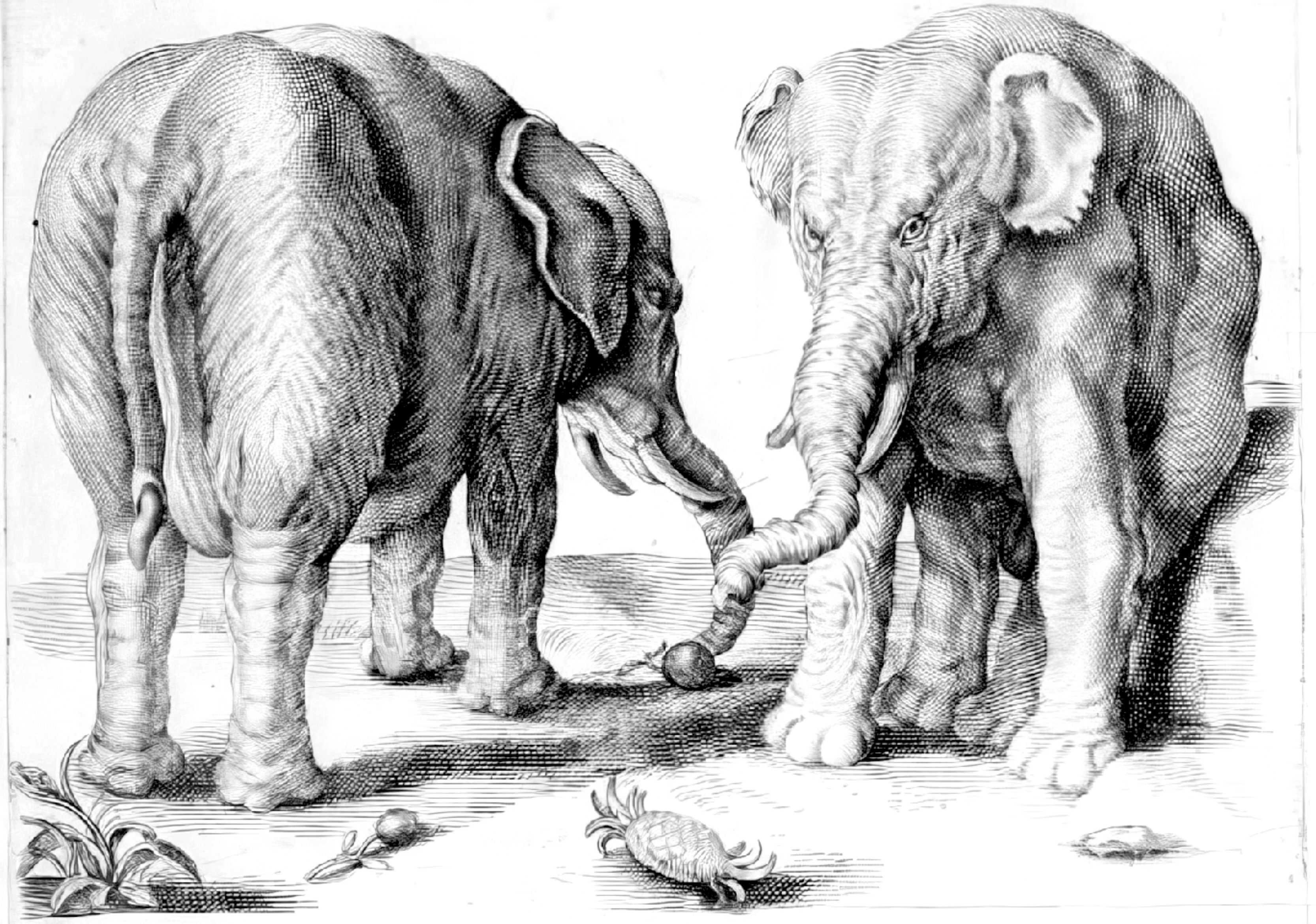


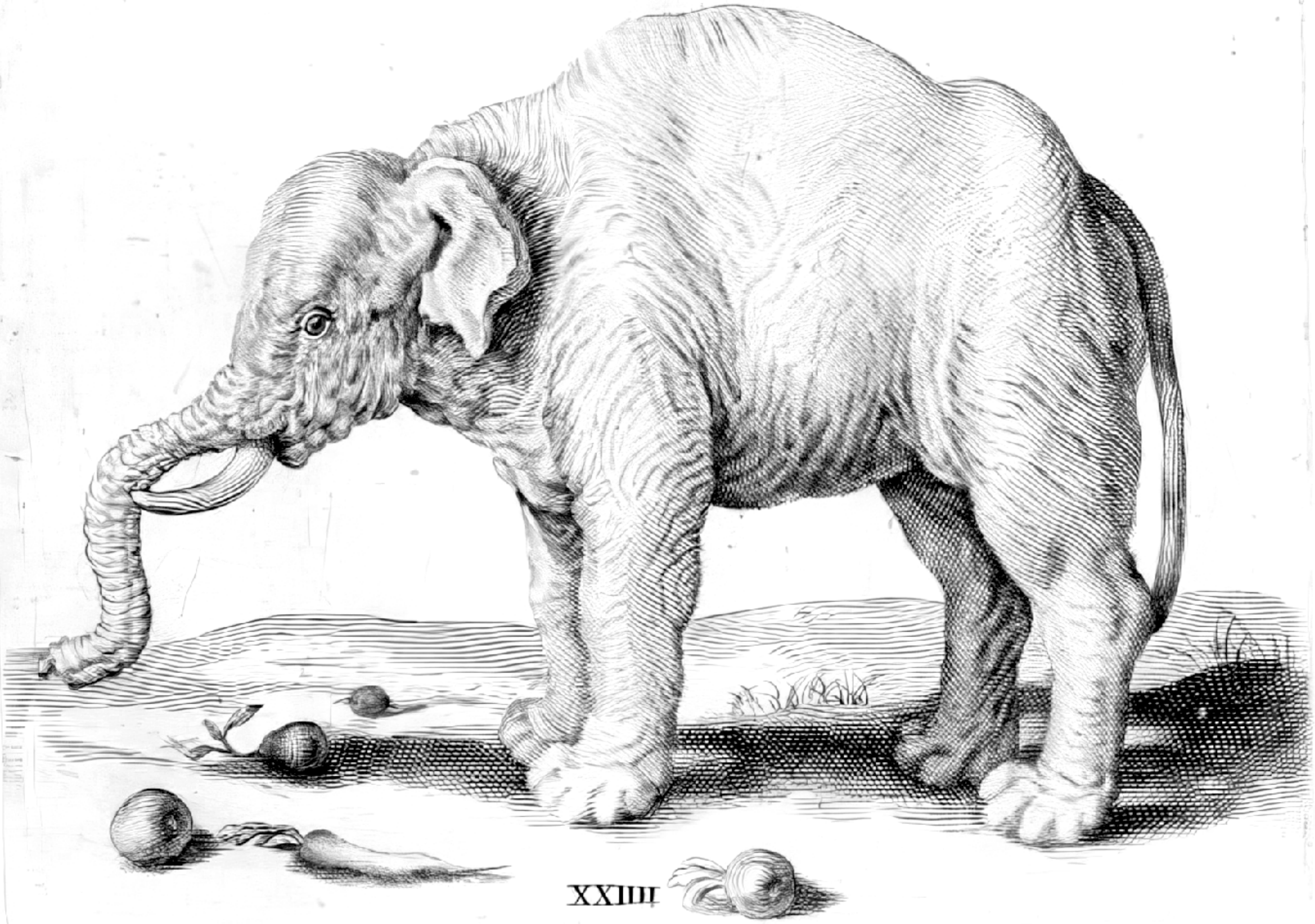
XXVI



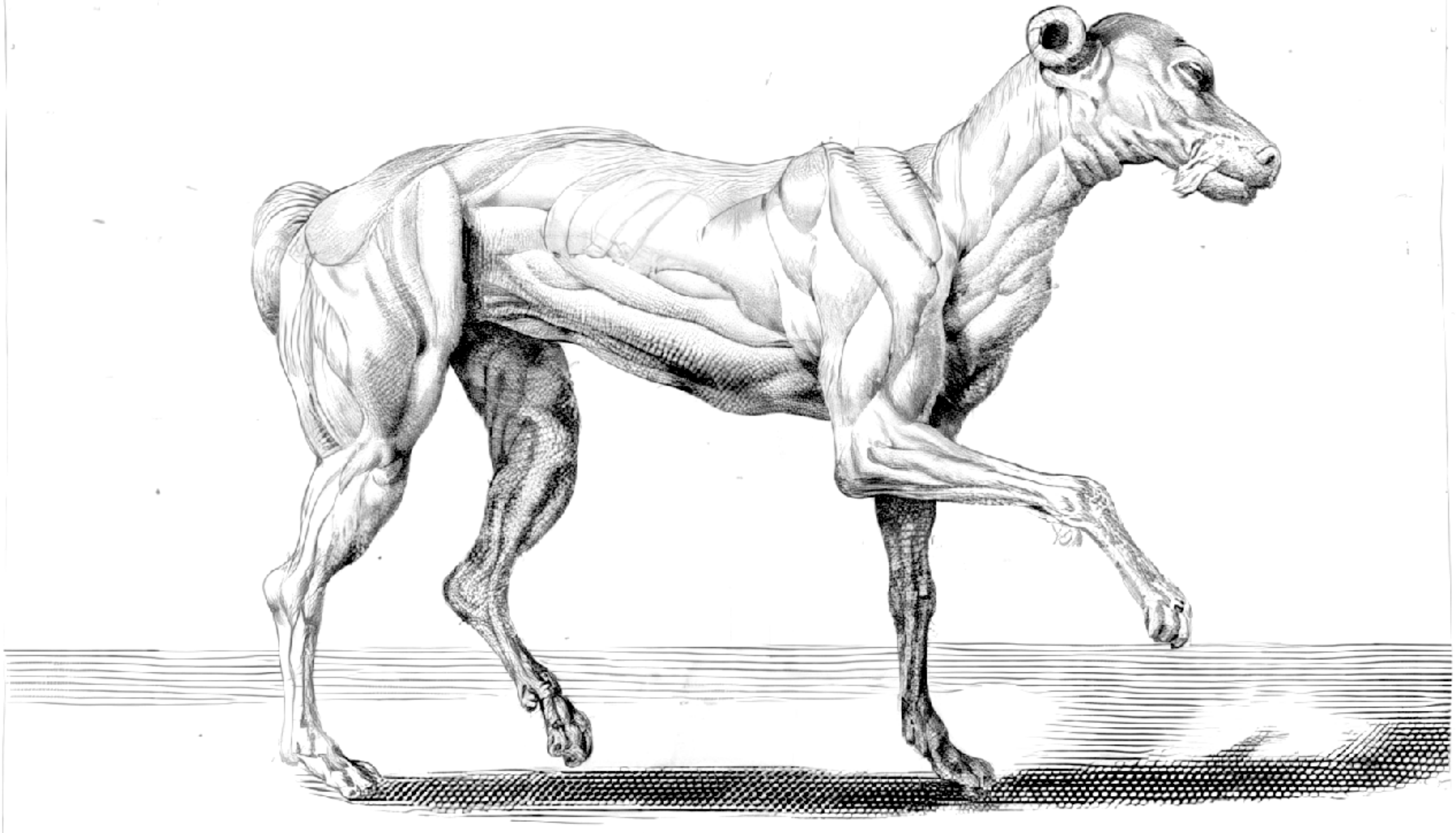


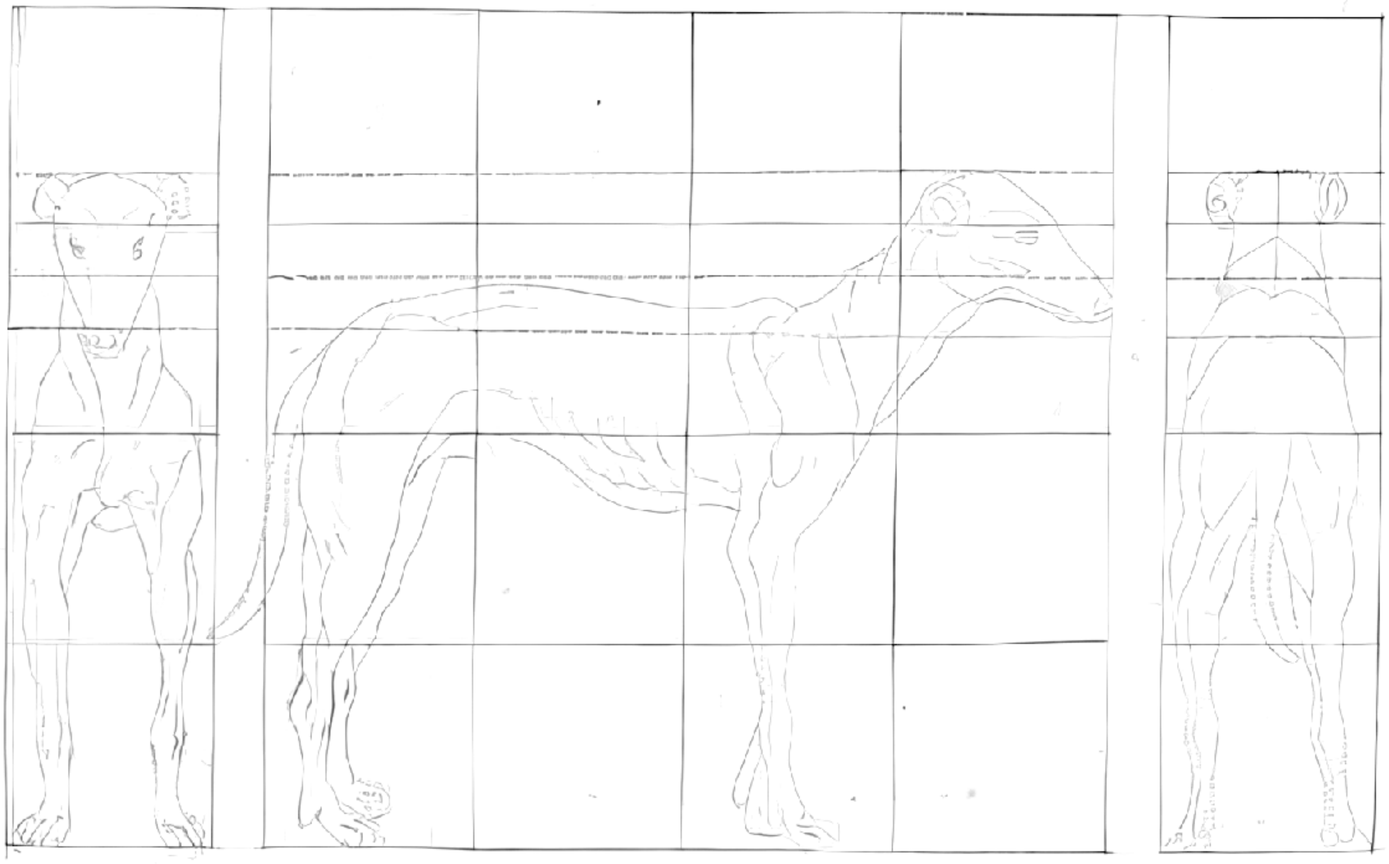
XXIII



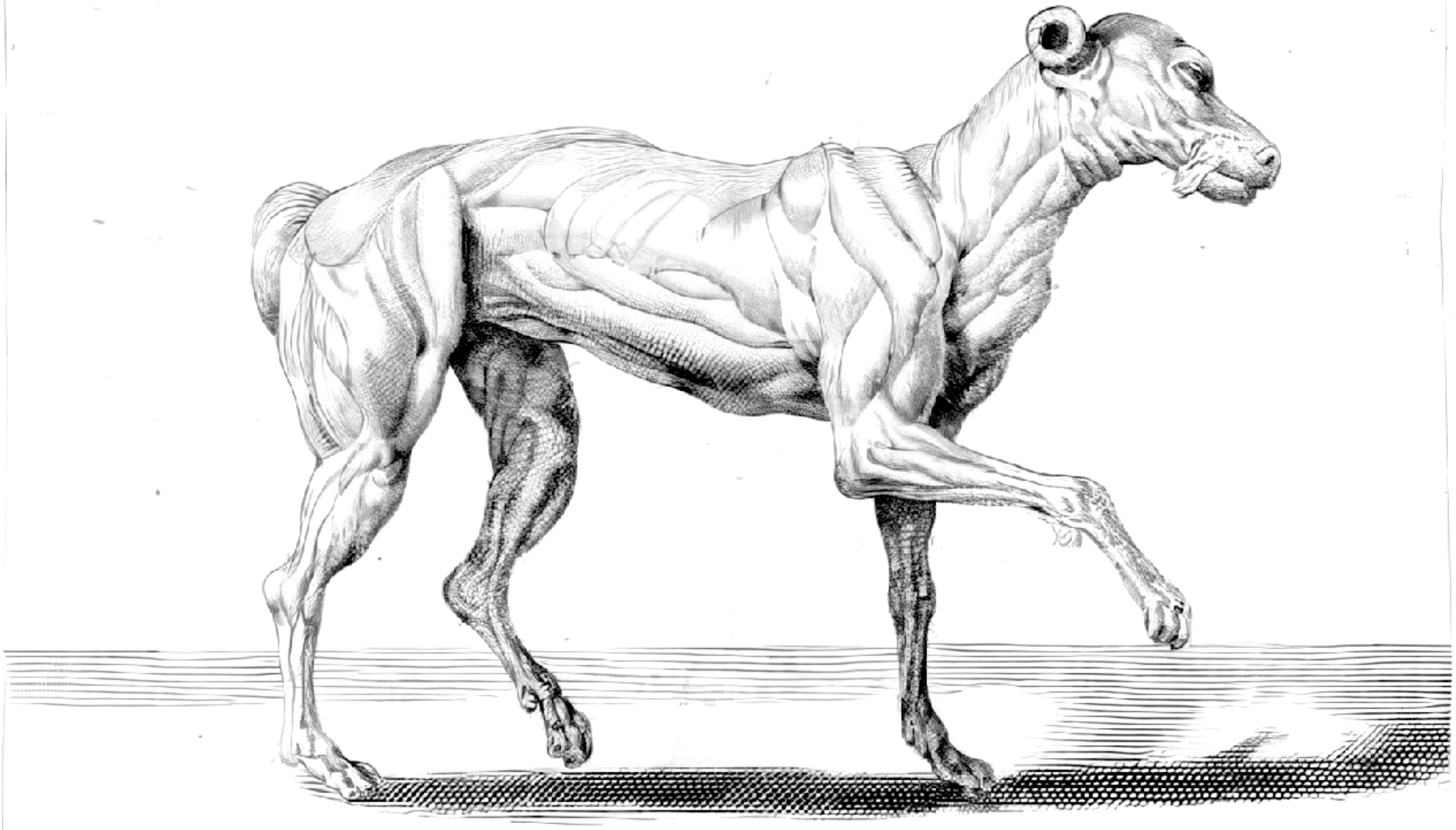


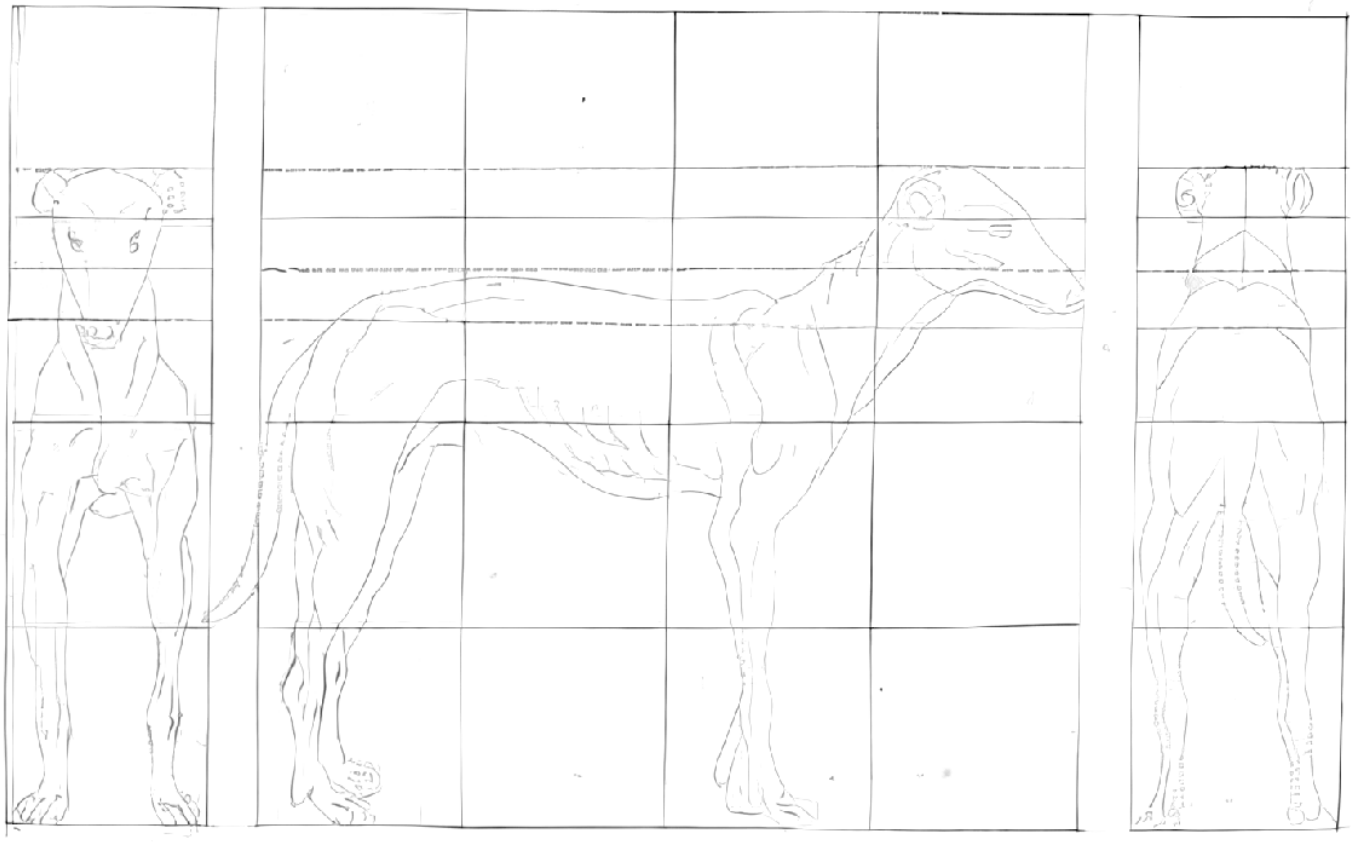
XXIIII



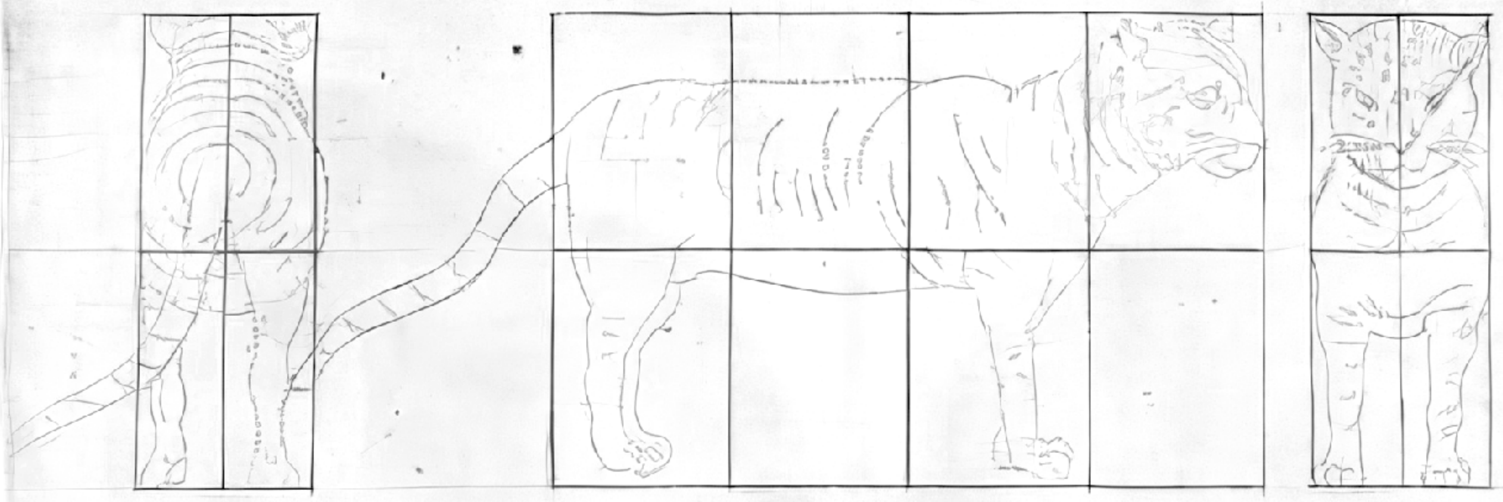


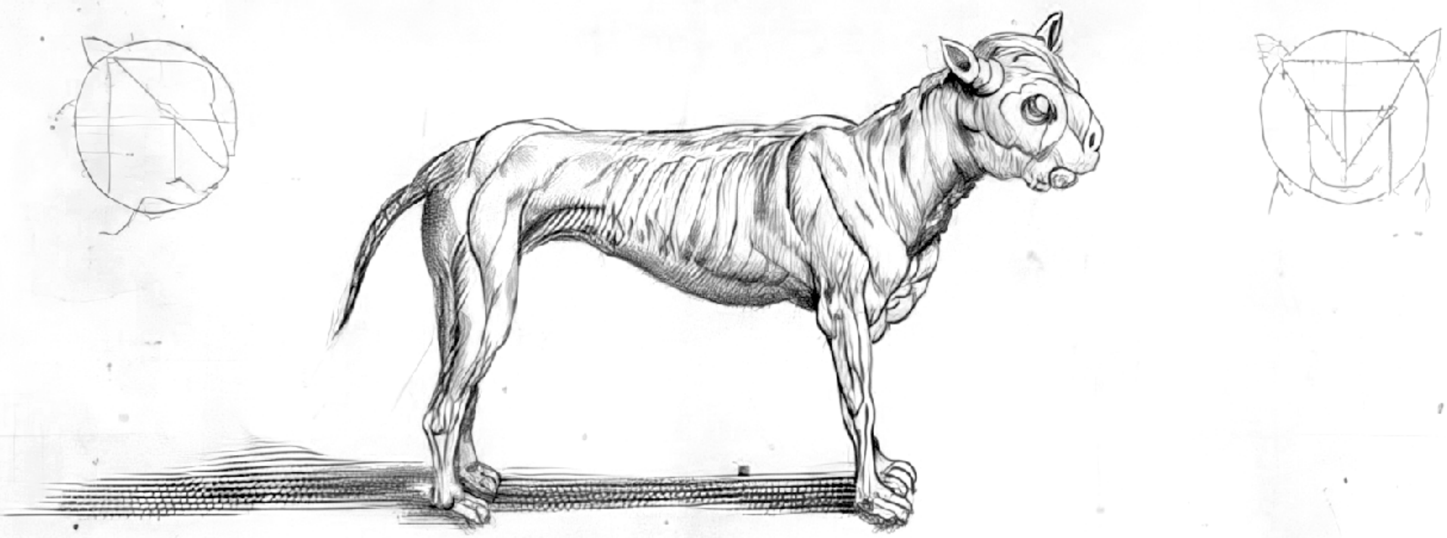
XXXI

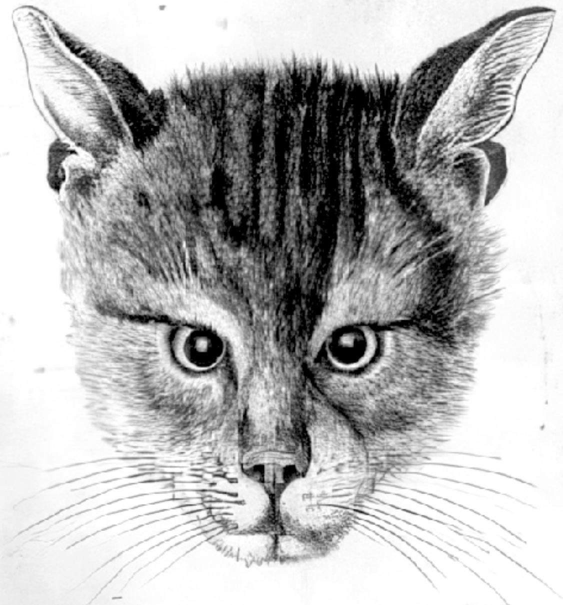


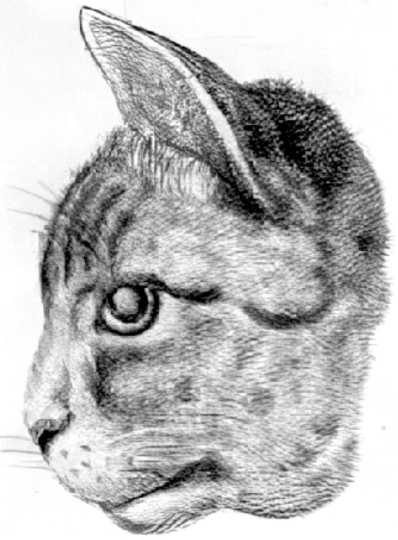


XXXI

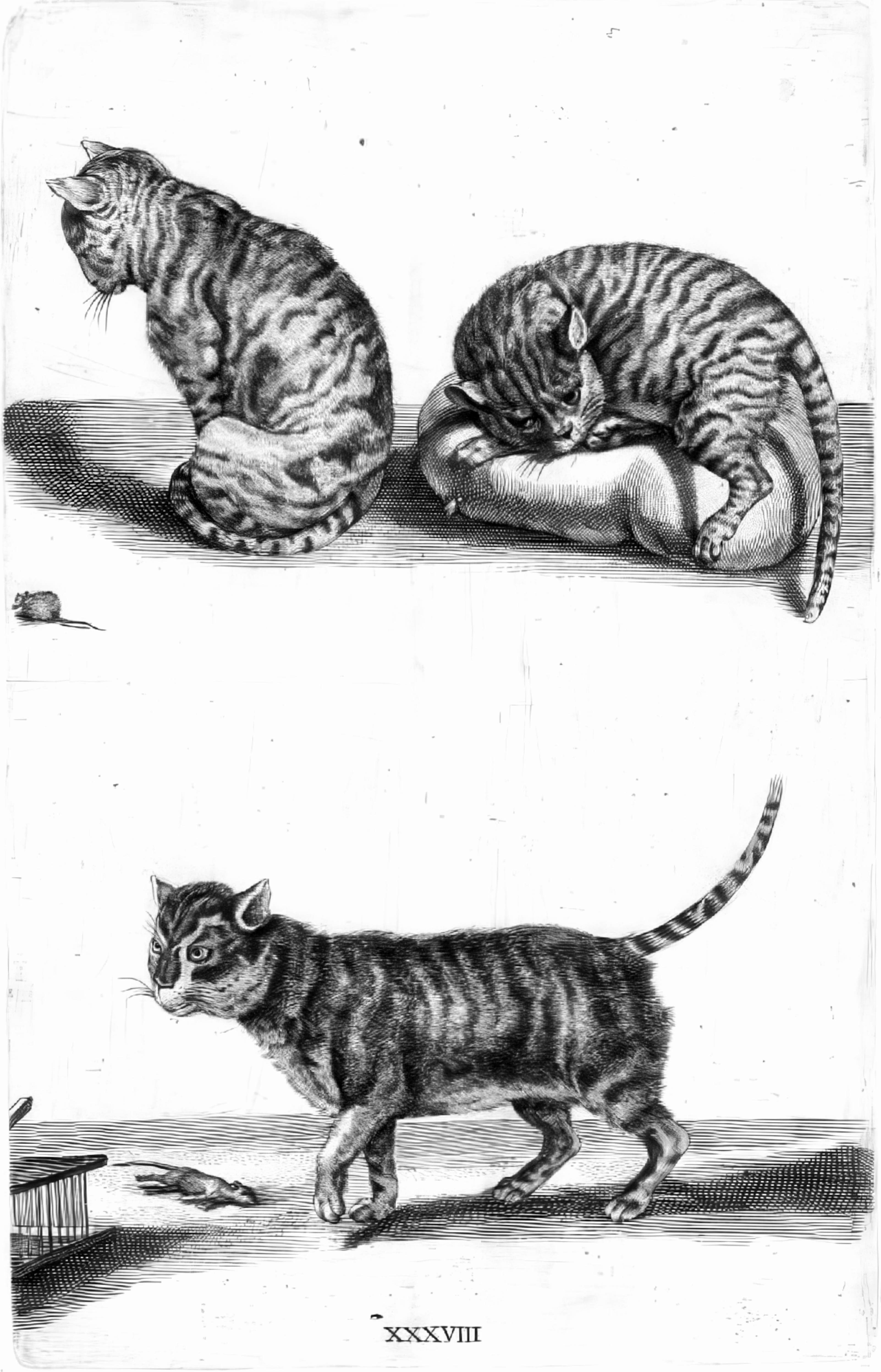




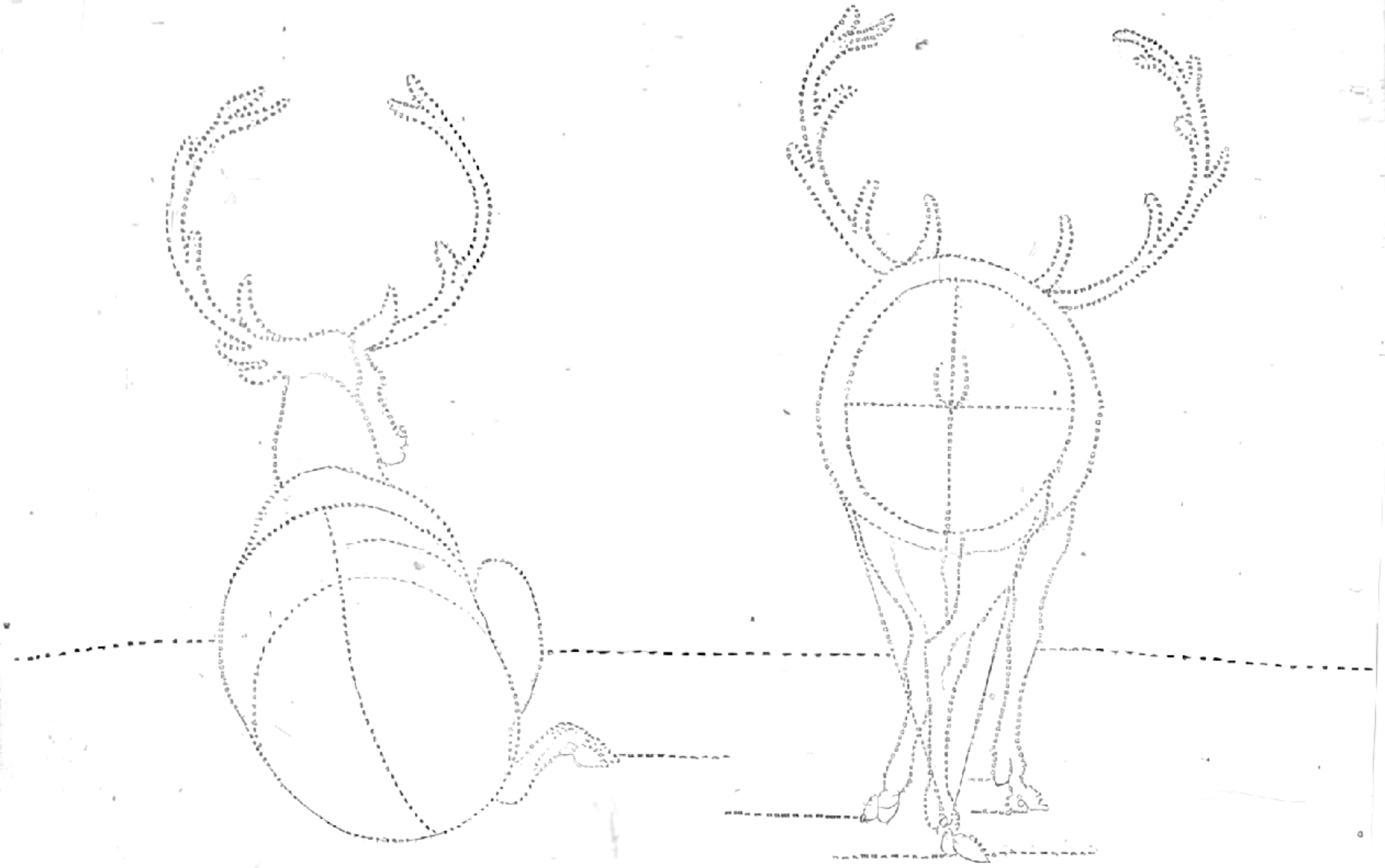


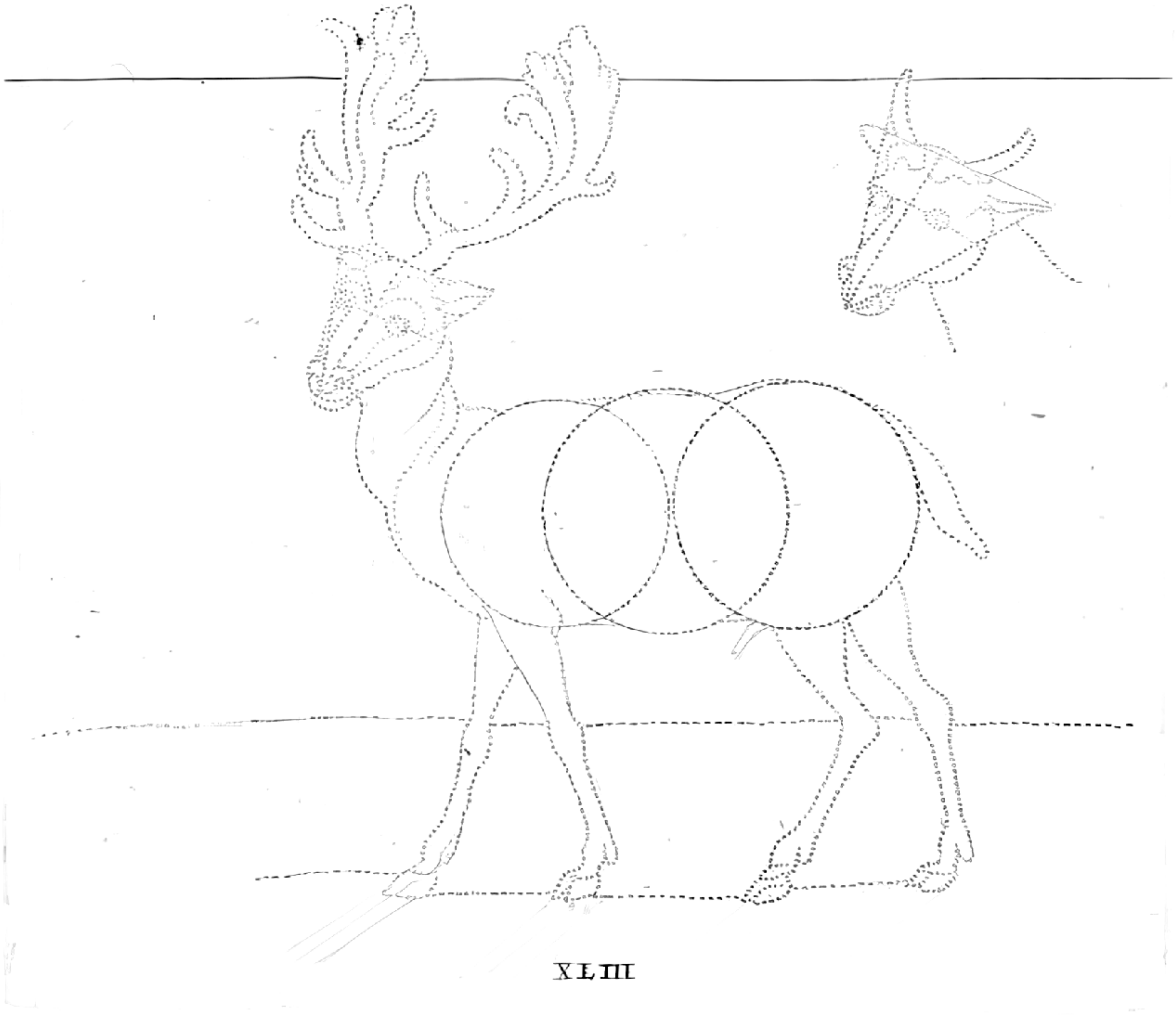


XXXVII

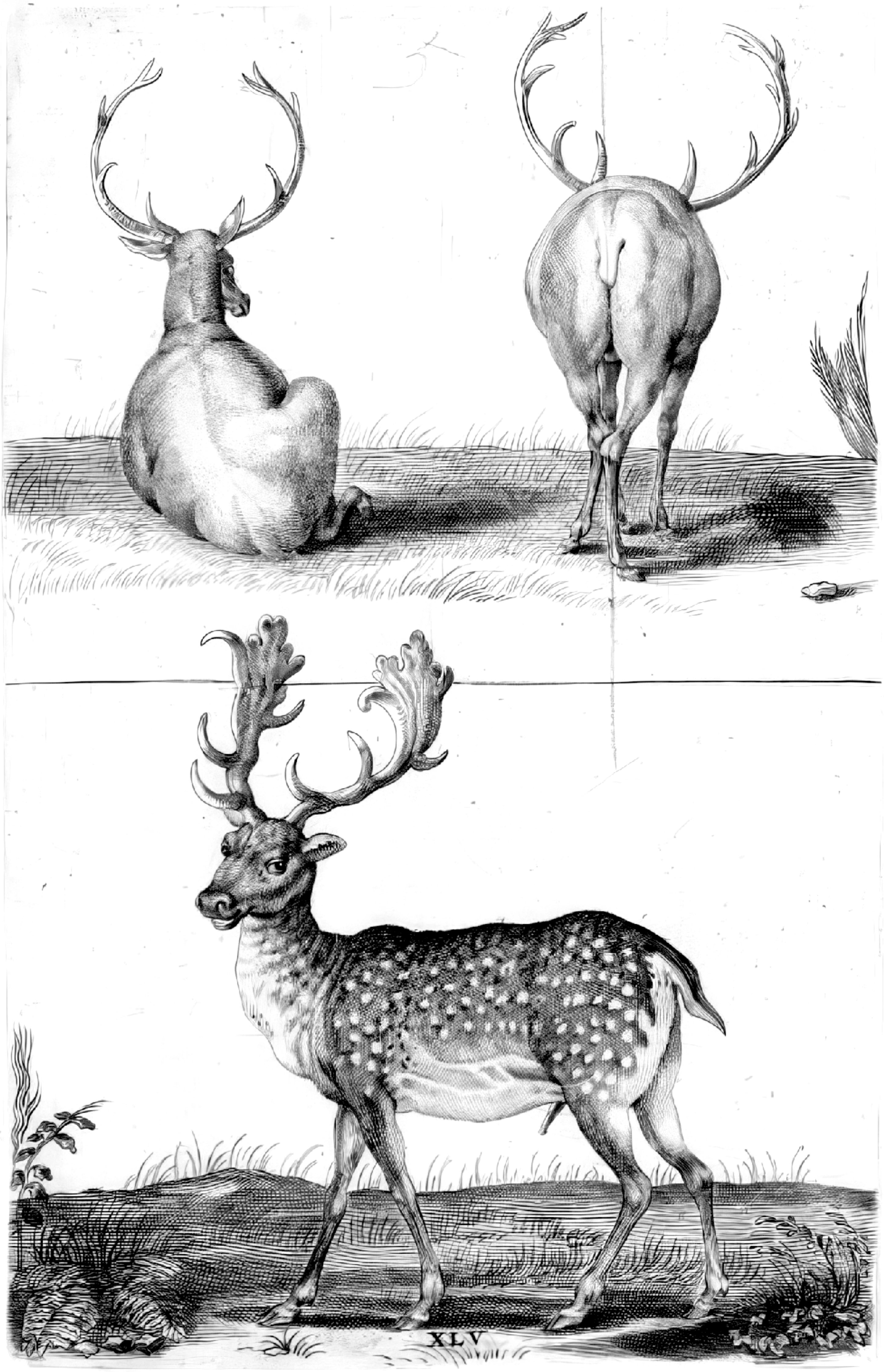


XXXVIII

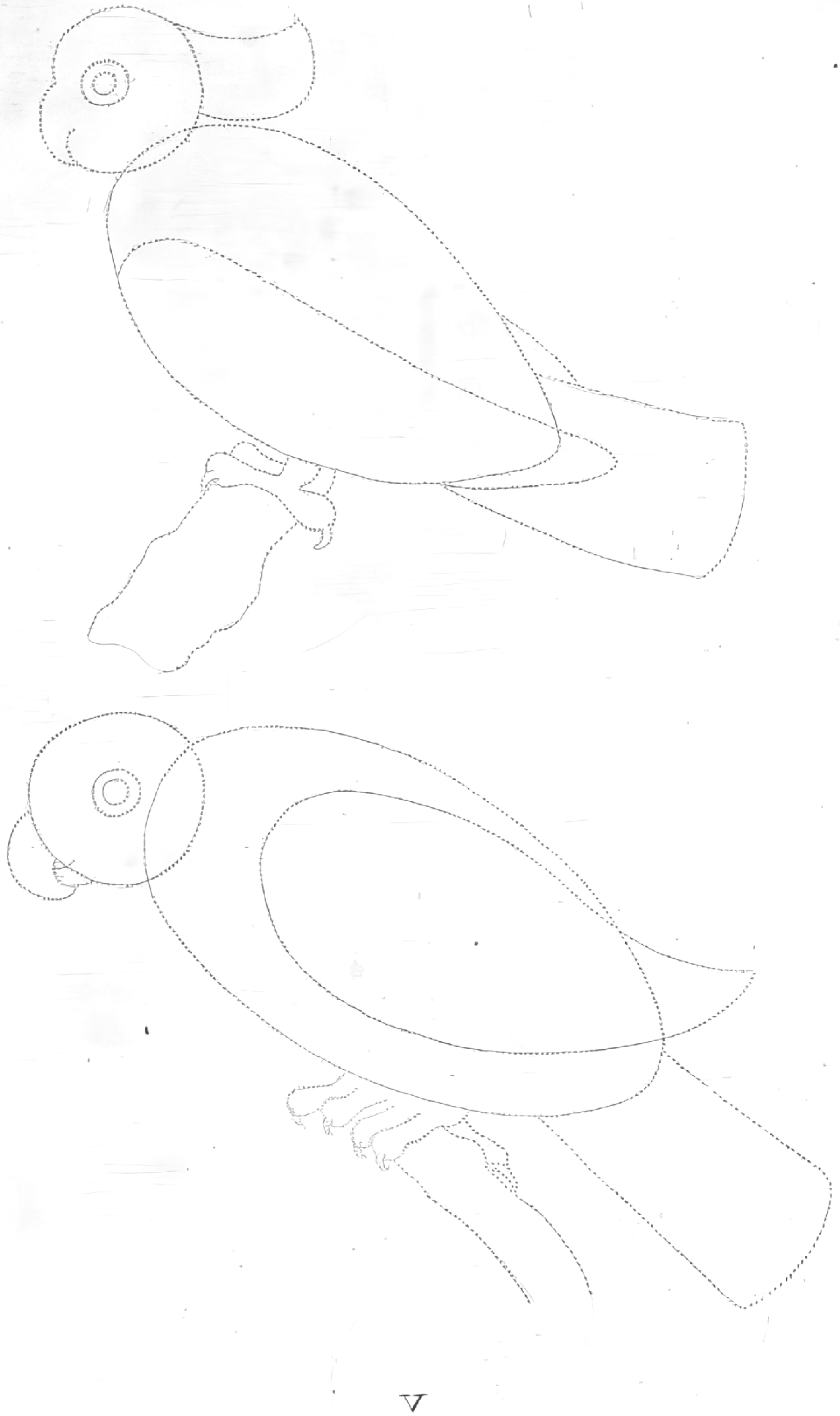




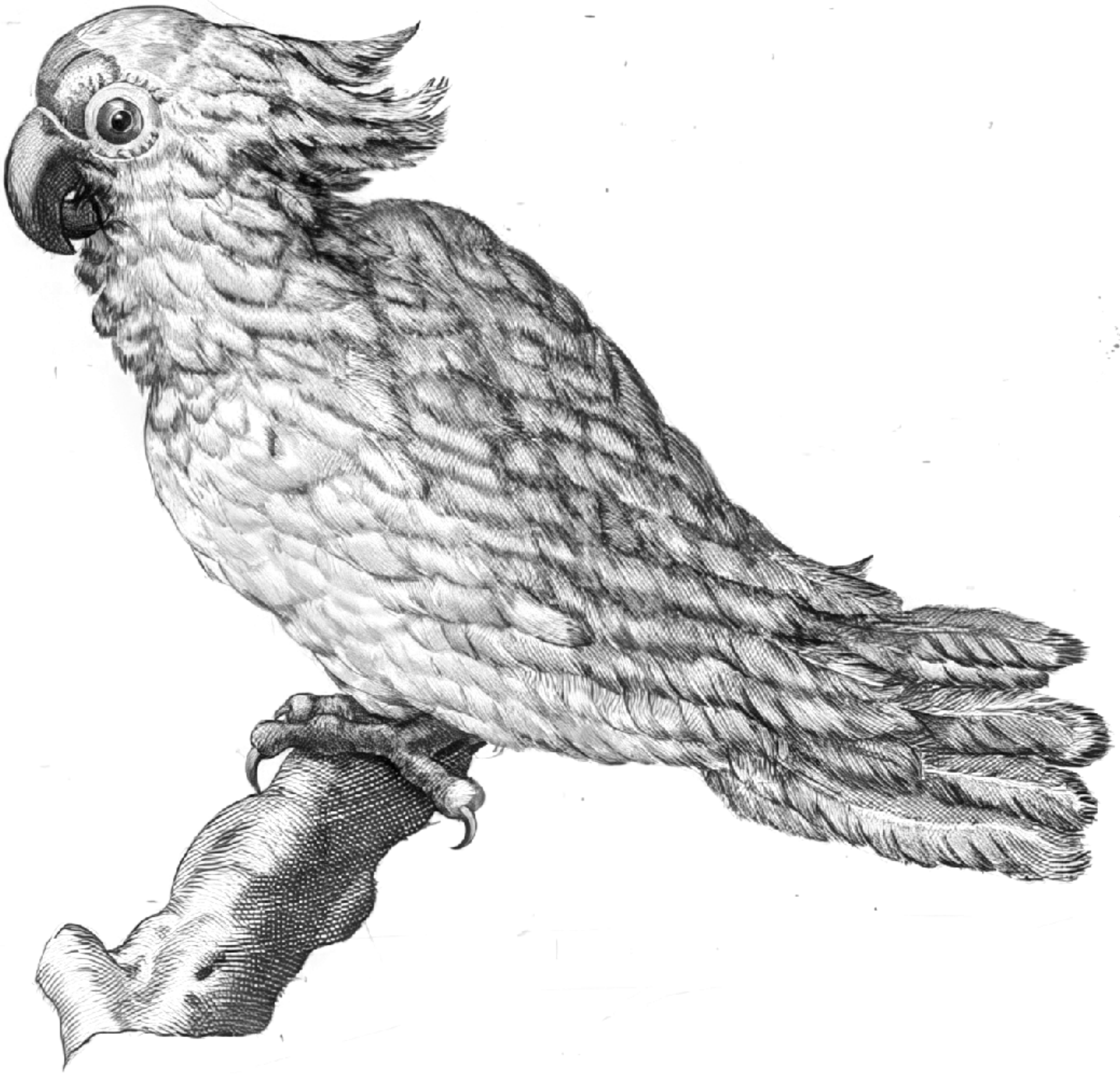
XLIII

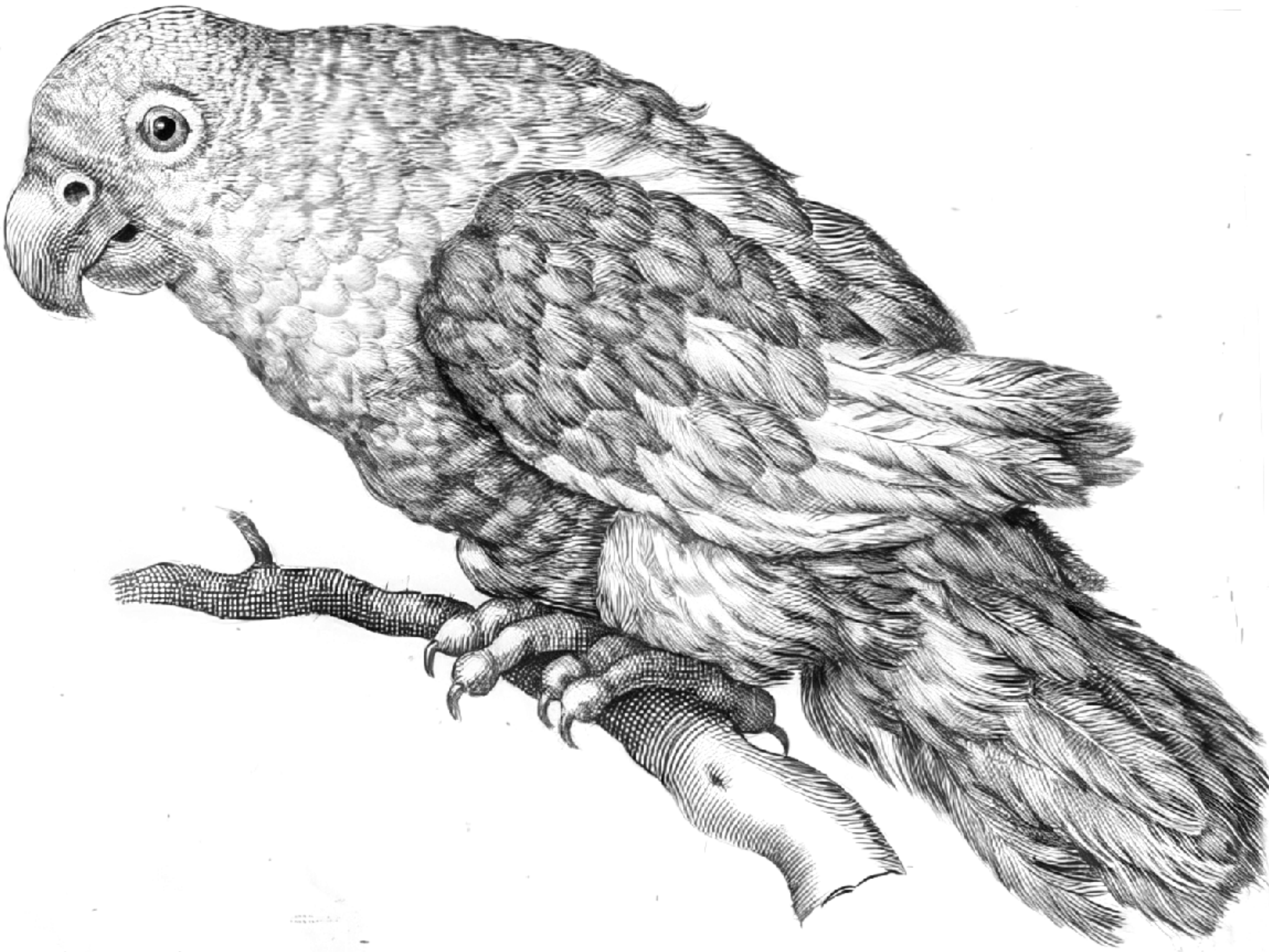


XLV

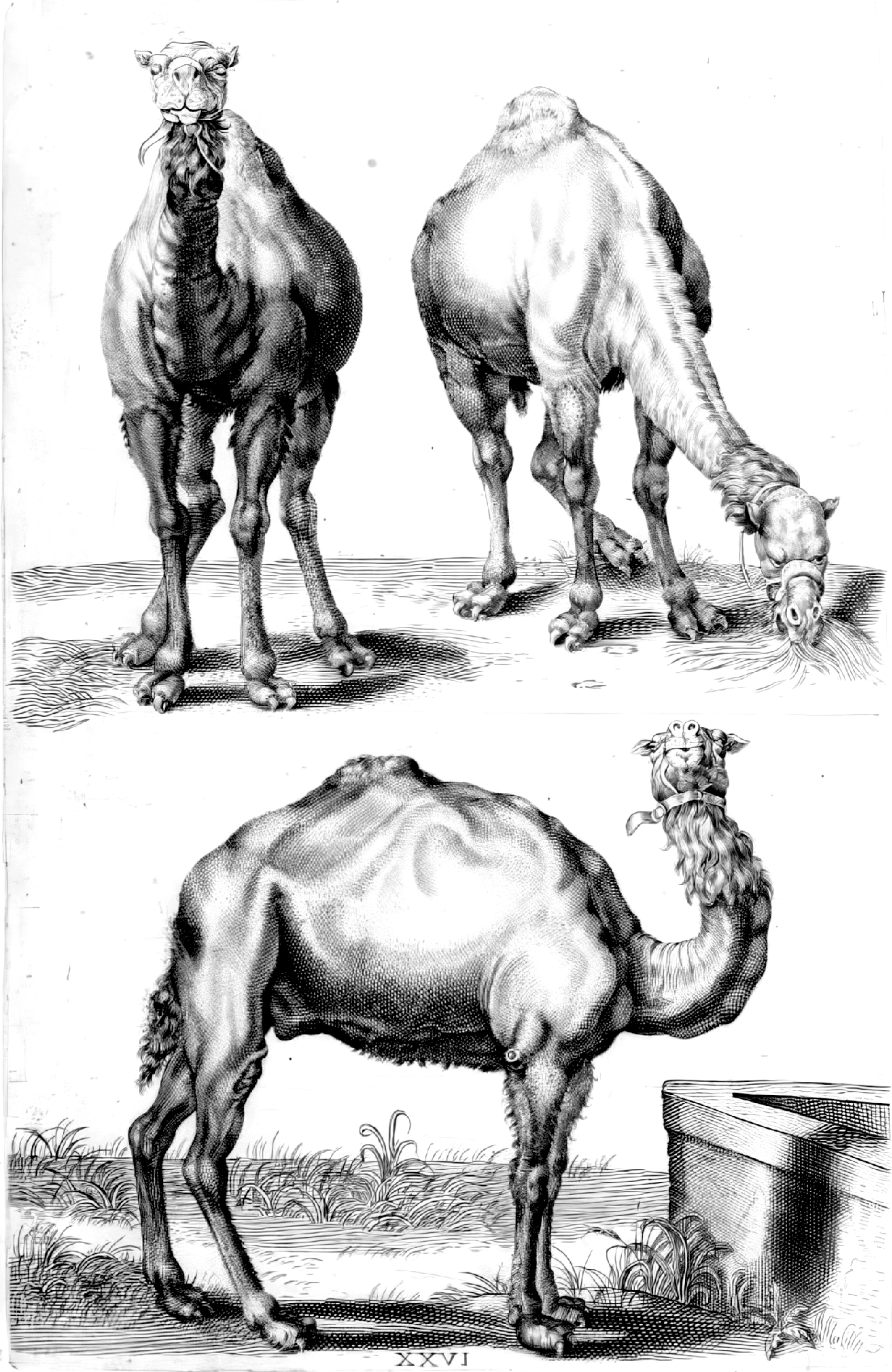


V

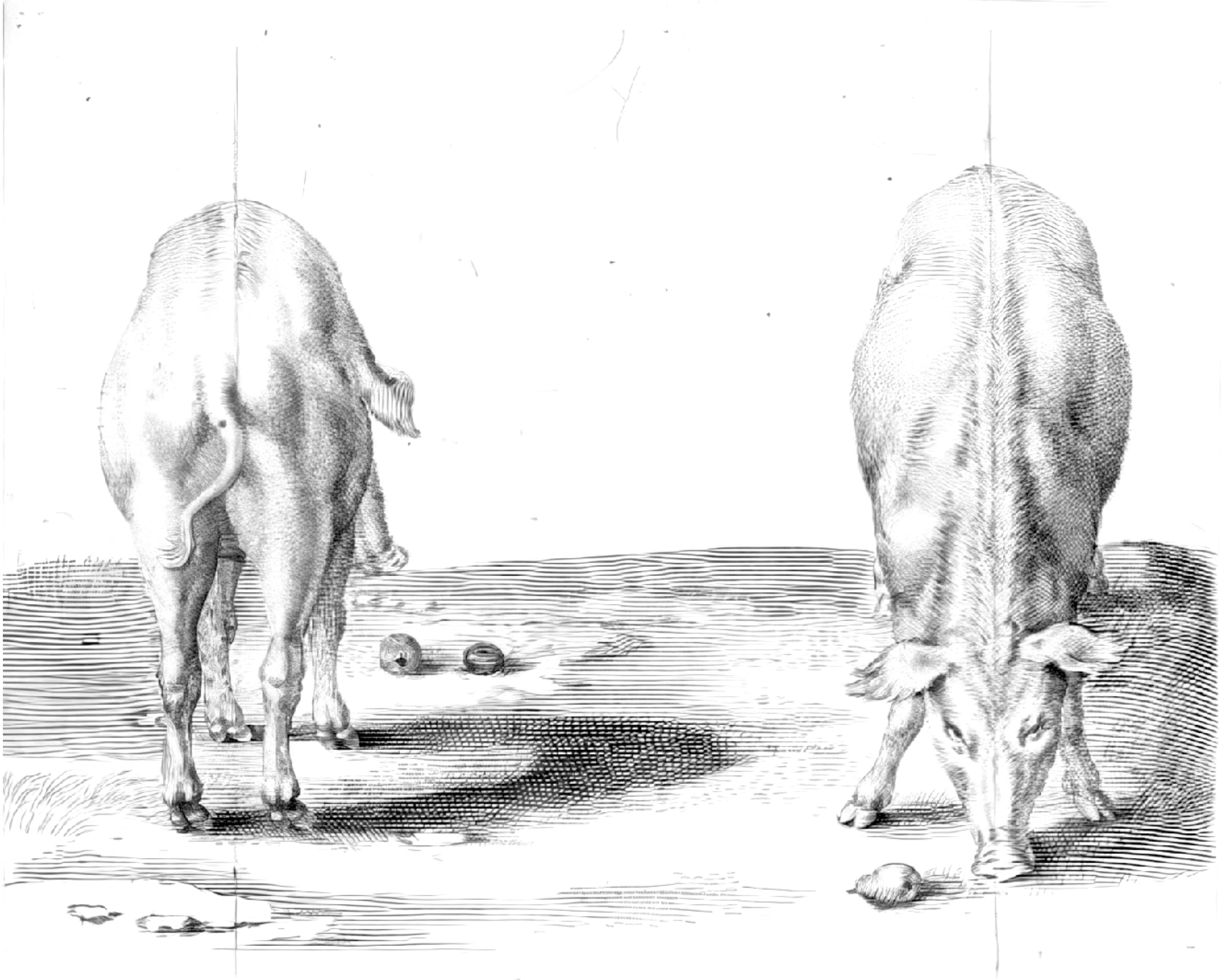


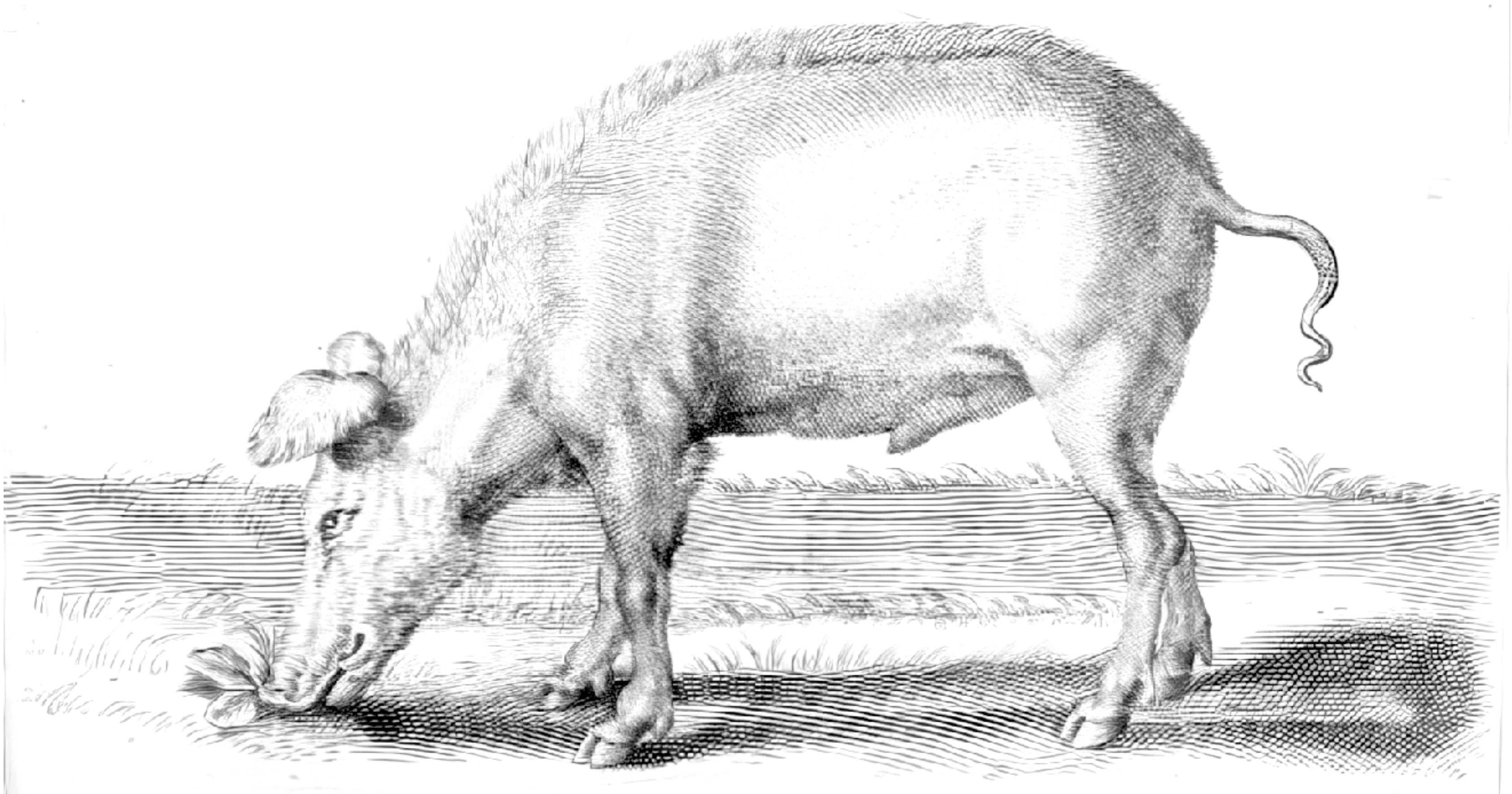


VI

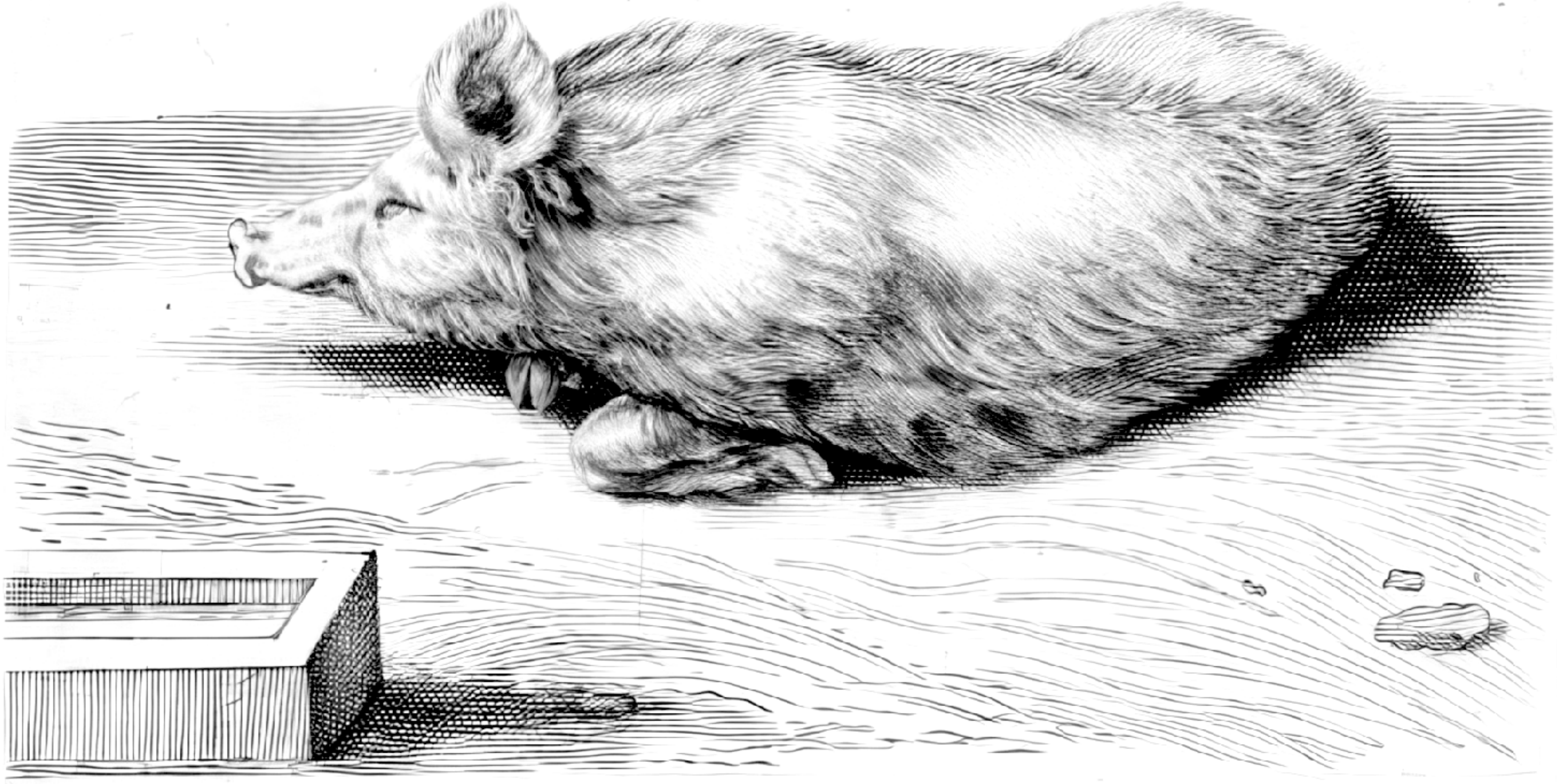


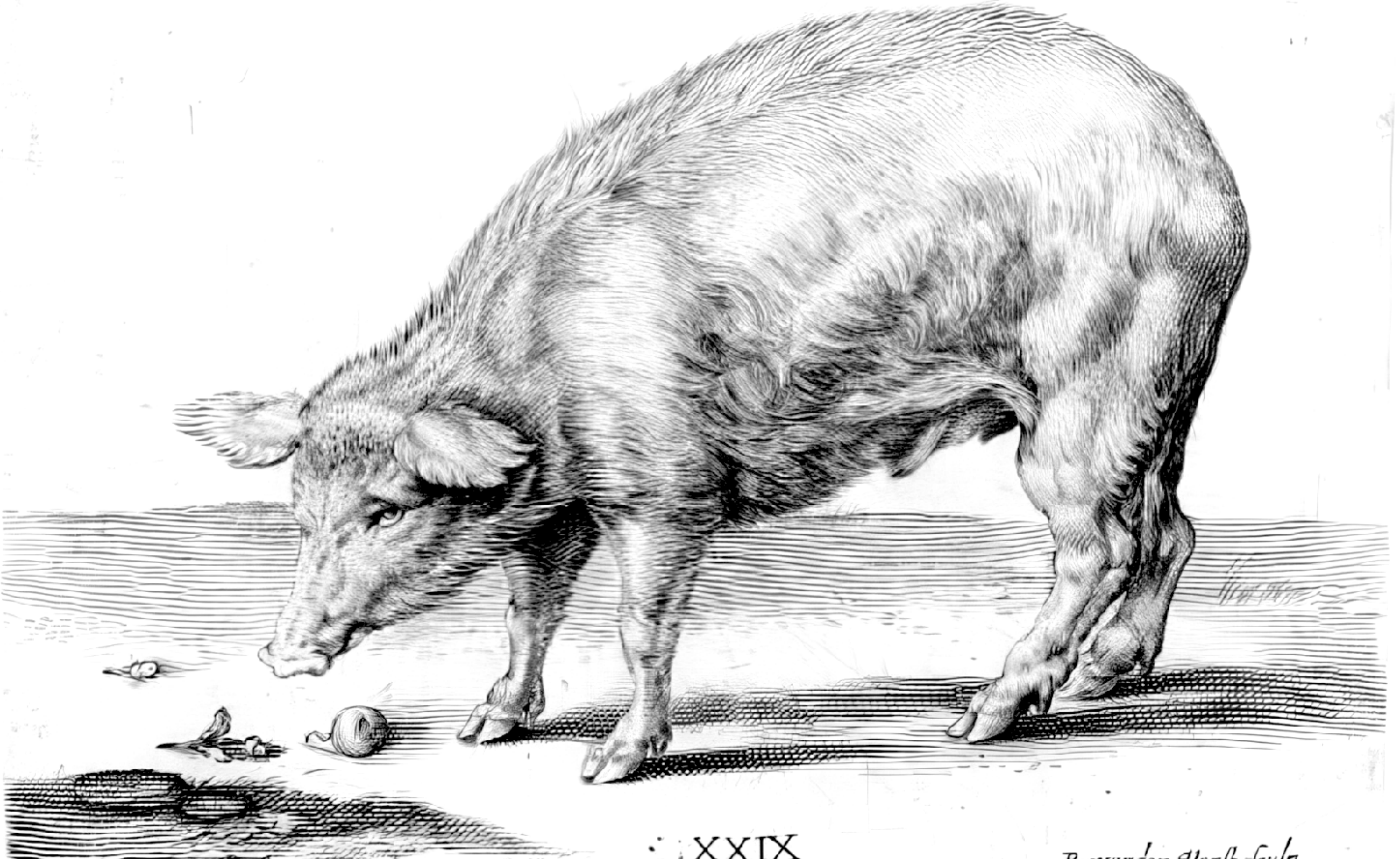
XXVI





X~~I~~XVIII

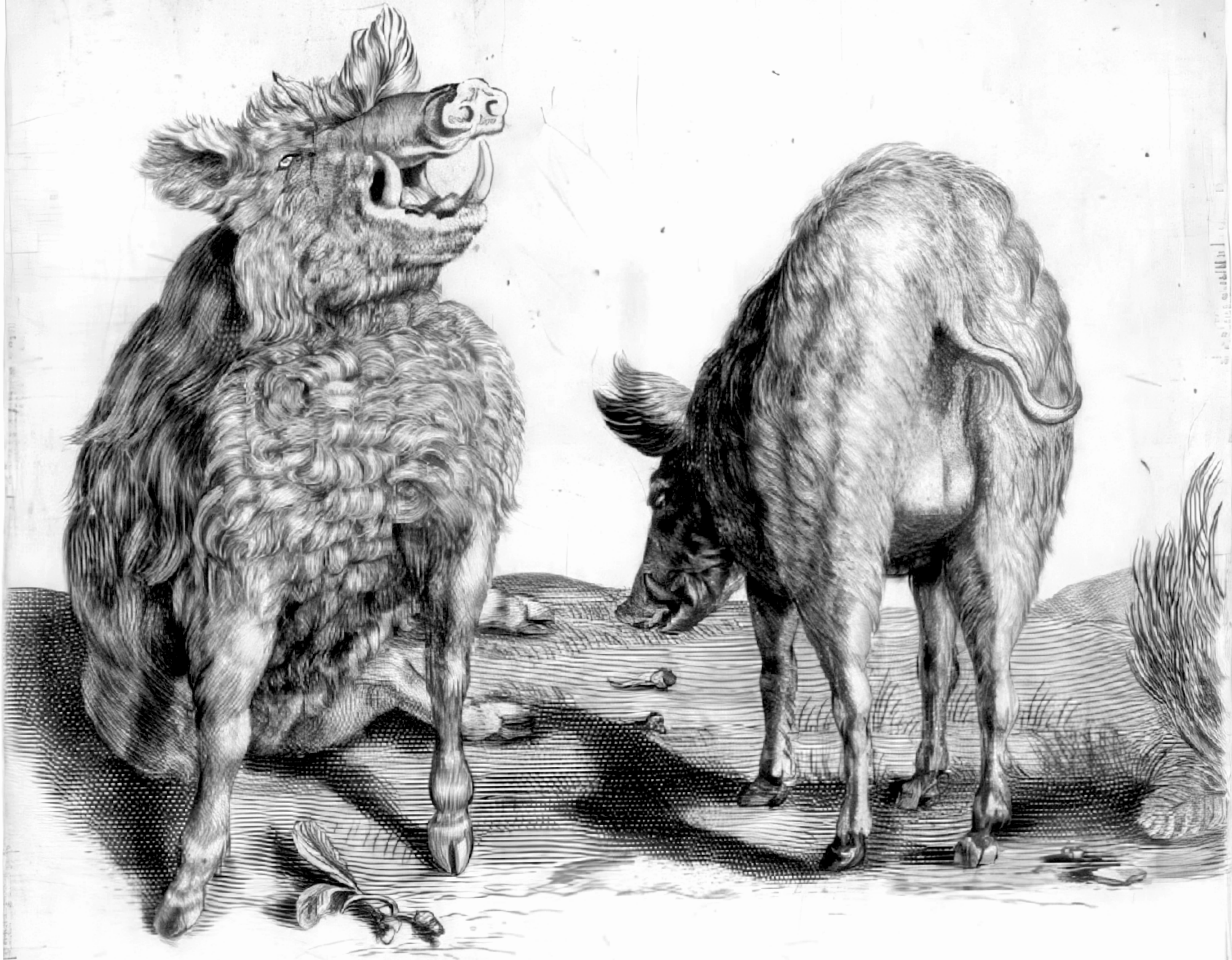


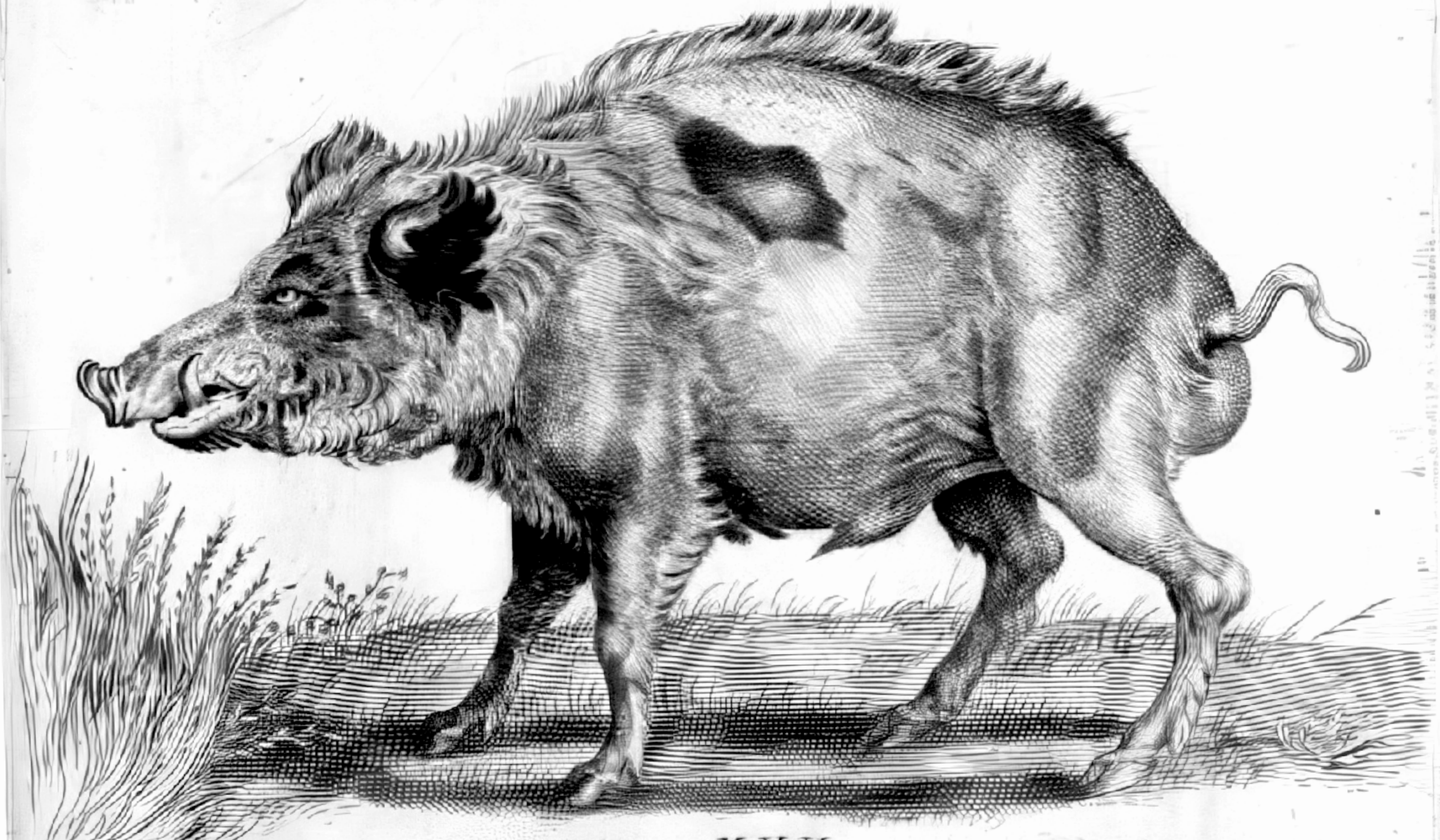


R. Savery pinxit.

XXIX

R. vander Voerst ſculp.





XXX